



# Discussion Paper

**Addressing the Impact of HIV/AIDS on Ministries of Agriculture:  
Focus on Eastern and Southern Africa**

*A Joint FAO/UNAIDS Publication*

*2001*

## TABLE OF CONTENTS

### ACKNOWLEDGEMENTS

### EXECUTIVE SUMMARY

<b>1.</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>1.1</b>	<b>Background .....</b>	<b>1</b>
<b>1.2</b>	<b>Purpose, scope and methodology .....</b>	<b>2</b>
<b>2.</b>	<b>THE IMPACT OF HIV/AIDS ON THE AGRICULTURAL SECTOR.....</b>	<b>3</b>
<b>3.</b>	<b>THE RELEVANCE OF HIV/AIDS FOR MOAS .....</b>	<b>5</b>
<b>3.1</b>	<b>MoA staff vulnerability to HIV infection and AIDS impact.....</b>	<b>11</b>
3.1.1	MoA staff knowledge and awareness of HIV/AIDS.....	11
3.1.2	Attitudes toward HIV/AIDS within MoAs: stigmatisation and discrimination .....	11
3.1.3	MoA staff exposed to high risk situations.....	12
3.1.4	Response Measures.....	13
	Integrated HIV/AIDS workplace programmes .....	13
<b>3.2</b>	<b>Disruption of MoA operations and erosion of capacity .....</b>	<b>13</b>
3.2.1	The determinants of HIV/AIDS impact .....	15
a)	Reduced staff productivity .....	15
b)	Increase in Ministerial expenditures.....	16
c)	Increase in staff turnover.....	18
d)	Increase in the workload of MoA staff.....	18
e)	Loss of knowledge, skills and experience.....	19
3.2.2	Examples of responses .....	20
a)	Human capacity development .....	20
b)	Mainstreaming HIV/AIDS in the work of MoAs.....	21
c)	Adjusting MoA budgets .....	23
<b>3.3</b>	<b>Increased vulnerability of MoA clients to food and livelihood insecurity .....</b>	<b>23</b>
3.3.1	The impact of HIV/AIDS on food and livelihood security .....	24
a)	Adverse effects on land/labour productivity and on agricultural production.....	24
b)	Decline in on- and off-farm disposable household income .....	25
c)	Erosion of farm household resource and asset base .....	26
d)	Erosion of knowledge base and skills for agricultural production.....	26
3.3.2	Examples of responses .....	27
a)	The introduction of labour- and capital-saving agricultural and household technologies and practices .....	27
b)	The enhancement of household income-generating capacity .....	28
c)	The promotion of women's and children's rights to land and other property .....	29
d)	Apprenticeship schemes and agricultural skills training for adolescents..	29

<b>3.3</b>	<b>Are MoA policies, strategies and programmes still relevant? .....</b>	<b>29</b>
3.3.1	The implications of HIV/ AIDS for MoA policies, strategies and programmes .....	29
a)	The limitations of a production-oriented approach.....	29
b)	Farm household labour: an abundant resource?.....	30
c)	Changing farm household typologies.....	30
3.3.2	Multi-sectoral responses to HIV/ AIDS.....	31
<b>4.</b>	<b>CREATING CAPACITY FOR AN MOA RESPONSE TO HIV/AIDS .....</b>	<b>33</b>
<b>4.1</b>	<b>Addressing the impact of HIV/AIDS within MoAs .....</b>	<b>34</b>
<b>4.2</b>	<b>Adjusting MoA policies, programmes and services .....</b>	<b>37</b>
<b>5.</b>	<b>BIBLIOGRAPHY.....</b>	<b>45</b>

## ACKNOWLEDGEMENTS

This paper was researched and written by Daphne Topouzis, PhD., consultant, under the direction of Jacques du Guerny of FAO and Werasit Sittitrai of UNAIDS.

Special thanks are due to the staff of the Ministries of Agriculture of Namibia, South Africa, Tanzania, Uganda and Zambia for their responses to a questionnaire on the impact of HIV/AIDS on MoAs and their work, and to the FAO representatives in these countries for their input in eliciting responses to the questionnaire. The critical comments of Michel Carael and Anita Alban of UNAIDS, Emilia Timpo of FAO, Cynthia Hewitt of UNRISD, and Robin Jackson of WFP on an early draft of this paper are also gratefully acknowledged.

Professor Desmond Cohen, former Director of UNDP's HIV and Development Programme, was very helpful in giving an overview of UNDP's HIV/AIDS mainstreaming initiatives, while Sam Ibanda, Assistant Resident Representative of UNDP in Uganda, sent valuable supporting documents from this exercise. Damber Gurung, a World Bank consultant, shared relevant material generated by the Bank's Rural HIV Initiative. Jolly Kamwanga gave her permission to use the preliminary findings of her study on "Disease, HIV/AIDS and Capacity of the Agriculture Public Sector in Zambia". Guenter Hemrich, a food security and HIV/AIDS expert, commented extensively on the conceptual framework of this paper and on several early drafts. Donatella Ruggiero of FAO gave invaluable logistical support. From UNAIDS, Siv Lillestöl, Marie-Odile Emond, Yuri Kobyshcha, Clement Chan Kam, Aurorita Mendoza and Pierre Somse gave helpful comments.

The contributions of these individuals and of other FAO and UNAIDS staff are gratefully acknowledged.

## EXECUTIVE SUMMARY

This paper examines the relevance of HIV/AIDS for Ministries of Agriculture (MoAs) and their work in sub-Saharan Africa, and particularly in Eastern and Southern Africa. The focus of analysis is smallholder agriculture as this has been affected most severely by the HIV epidemic.

Given that the mandate of most MoAs is to enhance agricultural production and promote food security, the adverse impacts of HIV/AIDS are of pivotal importance to their work. HIV/AIDS may not appear to have a significant impact on agricultural production and productivity at national level. However, its impact on a growing number of vulnerable smallholder farmers can be severe as these may suffer the combined loss of household labour, income, assets, knowledge and skills, with resulting threats to their livelihood as well as their food and nutrition security. In some cases, **HIV/AIDS can even contribute to food scarcity in areas hitherto known for food availability and surplus.**

The systemic impact of HIV/AIDS and the magnitude of its scale are **changing the environment in which MoAs operate**, triggering or intensifying a number of **structural changes in the smallholder sector in particular**, including: **long-term changes in farming systems** (as household cultivation shifts from cash crops to subsistence crops and from labour-intensive to labour-extensive crops); and **changes in the age structure and quality of the agricultural labour force** as more elderly people and children assume a greater role in farming.

Four areas of HIV/AIDS impact are analysed in detail:

- MoA staff vulnerability to HIV infection and AIDS impact;
- the disruption of MoA operations and the erosion of capacity to respond to the challenges being posed by the HIV epidemic;
- the increased vulnerability of MoA clients to food and livelihood insecurity;
- the relevance of certain MoA policies, strategies and programmes in view of the conditions being created by HIV/AIDS.

The paper reviews selected examples of MoA responses and proposes additional ways of creating capacity within Ministries of Agriculture to ensure the sustainability of on-going programmes and to help address the challenges posed by the HIV epidemic.

### **MoA staff vulnerability to HIV infection and AIDS impact**

**HIV/AIDS directly affects MoA staff and their families through morbidity and mortality.** Yet, even in countries with high adult HIV/AIDS prevalence rates, staff knowledge and awareness of the epidemic may be inadequate and perceived self-risk of HIV infection may be low. Further, stigmatisation and discrimination in the workplace are likely to be present in varying degrees unless pro-active workplace programmes are in place.

Certain categories of MoA staff may be particularly vulnerable to HIV infection. These may include employees who need to travel extensively in order to carry out their duties, such as agricultural extension workers, high-level professionals and management staff who frequently attend seminars, conferences and in-service training as well as support staff, such as drivers. These employees often have to spend extended periods away from their homes and families and may adopt lifestyles that make them vulnerable to HIV infection. Another group of employees that may be vulnerable, as pointed out by one MoA in Southern Africa,

are poorly paid employees (especially women), who may try to exchange sex for money or favours.

### **Disruption of MoA operations and erosion of capacity**

For MoAs, as for other Ministries and rural institutions, erosion of capacity translates into a diminished capability to deliver services, to cope with crises (inclusive of HIV/AIDS), and to function as organizations. **It is often underestimated that the impact of the HIV epidemic makes it increasingly more difficult for MoAs to address their mandate, let alone the challenges posed by HIV/AIDS.**

More specifically, the HIV epidemic disrupts MoA operations by **severing key linkages in the service delivery chain** between MoAs and their clients, through, for instance, its impact on the agricultural extension service. This disruption in services occurs when MoA clients affected by the epidemic need extension support most. HIV/AIDS also impacts on MoAs at the organizational level by claiming the lives of highly qualified staff who are difficult to replace, thus **creating vacuums in the structural organization of the Ministry.**

**Factors which determine the impact of HIV/AIDS** on MoA operations and capacity include:

- a) **reduced staff productivity** (through loss in human resources, absenteeism due to morbidity and funeral attendance, morbidity-related on-the-job fatigue and staff demoralisation);
- b) **an increase in ministerial expenditures** (due to costs related to HIV/AIDS absenteeism, medical and burial costs, recruitment and replacement costs, etc.);
- c) **an increase in staff turnover;**
- d) **an increase in the workload of MoA staff;**
- e) **the loss of knowledge, skills and expertise among MoA staff.**

MoA responses to the disruption of its operations and to the erosion in capacity have included human capacity development and HIV/AIDS mainstreaming efforts. **Human capacity development** has consisted primarily of sensitisation and training exercises. Raising awareness of MoA staff, an exercise which has been undertaken in a number of countries, tends to be a one-off event rather than an on-going process. As such, it ends up being a goal in itself rather than a means to an end. Once awareness-raising sessions are completed, there are usually no follow-up activities to build upon the skills and information imparted, such as concrete initiatives to integrate HIV/AIDS into divisional/departmental or district-level workplans and into MoA budgets. Capacity development needs to include follow-up training on the technical aspects of the impact of AIDS as well as training to strengthen the analytical capability of agricultural planners to factor the socio-economic impacts of the epidemic in their policies, strategies and programmes.

**Mainstreaming HIV/AIDS** in the work of MoAs has usually been carried out through AIDS focal points. These tend to be situated within “soft” units, such as the Family Life Education unit in the case of Uganda’s MAAIF, rather than within “hard” units (livestock, crop production, fisheries, agricultural extension, etc.). This identification of HIV/AIDS focal points with “soft” units can make mainstreaming of HIV/AIDS in the core areas of MoA work more difficult. In fact, in the case of Uganda, the HIV/AIDS mainstreaming exercise in the MAAIF was perceived to be

an added-on “project” rather than a process of integration of HIV/AIDS concerns in on-going MoA programmes.

The paper argues that **it is imperative that MoA budgets be adjusted** to reflect the direct and indirect costs of HIV/AIDS, and that response measures to the impact of HIV/AIDS be in place. Uganda’s MAAIF is the first MoA to introduce HIV/AIDS into its 2001 budget. This indicates a major shift in approach as the epidemic becomes a factor to be reckoned with at the budgetary level. For, unless HIV/AIDS features in MoA budgets, it is unlikely that measures to address it will be introduced in MoA divisional and district-level workplans and thus in core agricultural policies and programmes.

### **Increased vulnerability of MoA clients to food and livelihood insecurity**

The socio-economic impact of HIV/AIDS on rural households and smallholder agriculture, the vulnerability of smallholder farmers to the epidemic’s effects, and the coping mechanisms of households and communities have been explored in some depth over the last decade and are thus not reviewed in detail in this paper. Suffice it to say that HIV/AIDS adversely affects the productive capacity of farm households, thus influencing **availability, access and utilization of food**. HIV/AIDS impacts may include:

#### **i) adverse effects on land/labour productivity and on agricultural production**

Household **labour quality and quantity** may be reduced, first in terms of productivity, when HIV-infected persons fall sick, and later when the supply of household labour declines because of patient care and death. The impact of HIV/AIDS morbidity and mortality not only affects labour inputs to farm production, but, more significantly, it disrupts the household **production-domestic labour interface** by diverting women’s labour from regular caring activities to caring for persons living with HIV/AIDS. This may adversely affect the health and nutritional status of household members.

#### **ii) decline in on- and off-farm disposable household income**

HIV/AIDS greatly increases **household expenditures** and affects on- and off-farm income, and especially **the availability of disposable cash**, which largely determines the amount and quality of food that can be purchased.

#### **iii) erosion of farm household resources and asset base**

Many households are forced to dispose of their savings and to sell their food crops, livestock or even their land in order to cover medical care and funeral expenses. This has far-reaching consequences for food security and health.

#### **iv) erosion of the knowledge base and skills needed for agricultural production**

The death of one or both parents to HIV/AIDS may deprive a family of the necessary knowledge, experience and skills (both financial and managerial) to run the farm household. Similarly, when one parent dies, the surviving parent may not have the skills required to grow certain crops.

These effects may result in a substantial increase in the workload of women and a reduction in the caring capacity of households. In turn, these may impact on the nutritional status and composition of the household food basket (home-grown as well as purchased food) and contribute to a rise in child malnutrition.

Response measures that may enable rural communities to cope more efficiently with the impact of HIV/AIDS on food and nutrition security include:

- a concerted effort to introduce labour- and capital-saving agricultural and household technologies and practices (such as early maturing, disease-resistant crop varieties that are easily threshed and pounded and thus require less labour but are of high nutritional value; appropriate technologies for food preparation, etc.);
- the enhancement of household income-generating capacity to help maintain household expenditure patterns (through, for instance, micro-credit);
- the promotion of women's and children's access to land;
- apprenticeships and agricultural skills training for adolescents, etc.

### **Need to review certain MoA policies, strategies and programmes**

According to the Ministry of Agriculture, Food and Forestry in Zambia:

*Any development programme that does not deliberately address HIV/AIDS is bound to fail as the benefits that may be perceived in the programme could potentially be overwhelmed by the negative impact of HIV/AIDS.*

By extension, **the pertinence of certain MoA policies and strategies may be called into question given the conditions created by the HIV epidemic.**

For example, **HIV/AIDS puts into sharp focus the limitations of production-oriented approaches to agricultural and rural development** upon which MoA mandates are often premised. In particular, as acknowledged by the MAAIF in Uganda, the status and living conditions of rural producers are mostly absent from national agricultural policies and programmes. The MAAIF in Uganda recognizes that in view of the severity of the impact of HIV/AIDS, agricultural policies and programmes should address the **human factor of production**, i.e. the quality of life of the producers, inclusive of the impact upon them of HIV/AIDS.

Furthermore, the assumption that **farm household labour is an abundant, near inexhaustible resource** has to be revisited. A number of farming systems being promoted across sub-Saharan Africa are based on this premise, but given the scale of HIV/AIDS, plentiful labour can no longer be taken for granted. This has important implications not only for agricultural production and productivity but also for food and nutrition security. In addition, what is commonly perceived as "unskilled labour" could be hard to replace given its accumulated location- and task-specific skills.

Moreover, due to the impact of HIV/AIDS, **current farm household typologies upon which agricultural policies and programmes are based may no longer be valid.** The parameters of vulnerability of rural households, farming systems and livelihoods are changing as a result of HIV/AIDS-induced young adult morbidity and mortality and shifts in household demographic structure. Moreover, given the changes in composition of MoA clienteles (with increasing numbers of elderly, youth and women-headed households), existing extension strategies may not correspond to current needs.

In the 1990s, MoAs and donors responded to the impact of HIV/AIDS by initiating **multi-sectoral responses**. To date, **these have been largely health-dominated.** This is partly due to the fact that HIV/AIDS is still primarily situated within a health-dominated paradigm and is perceived to be far removed from the core work of MoAs. Adopting a multi-sectoral response to HIV/AIDS does not



merely entail the introduction of HIV prevention information, education and communication (IEC) activities. Nor does it mean adding HIV/AIDS-specific initiatives or, more generally, public health initiatives to existing agricultural programmes. Rather, it requires **factoring the developmental implications of HIV/AIDS into core agricultural policies, strategies and programmes**. To this effect, a shift is needed toward a developmental paradigm of response to the HIV epidemic that complements health-, gender- and livelihood-based initiatives with core agricultural activities.

### **Creating capacity for an MoA response to HIV/AIDS**

The recommendations presented below can only be translated into action once overall capacity erosion within MoAs is assessed and addressed. Given that day-to-day survival is the over-riding concern for most people in sub-Saharan Africa, long-term policies on HIV/AIDS are often of little relevance to MoA staff and clients alike. Therefore, it is not only capacity erosion resulting from HIV/AIDS that needs to be addressed, but overall capacity erosion in MoAs.

Creating capacity for an MoA response to HIV/AIDS requires a two-pronged approach: a) addressing the impact of HIV/AIDS within MoAs; and b) adjusting agricultural policies, programmes and operations to the adverse conditions created by the epidemic.

#### **a) Addressing the impact of HIV/AIDS within MoAs**

One or more of the following initiatives can help address the impact of the epidemic within MoAs, depending on the scale of the epidemic, the types of programmes already in place that may address HIV/AIDS, and capacity within the ministry:

##### **i) Assess the impact of HIV/AIDS on MoA staff, operations, policies and programmes, and in particular:**

- gather qualitative and quantitative data on the direct/indirect costs of HIV/AIDS on ministerial operations;
- identify key administrative, managerial and technical MoA posts currently vacant that need to be filled in order to prevent further disruption of essential services;
- gather qualitative and quantitative data on the impact of HIV/AIDS on MoA target groups, on farming systems and on food and livelihood security; and closely monitor changes in the nutritional status of MoA target groups.

##### **ii) Establish AIDS in the workplace programmes**

AIDS in the workplace programmes can assist MoAs to systematically address the vulnerability of their employees to HIV infection and AIDS impact. In particular, such programmes should:

- institutionalise IEC prevention initiatives and ensure that awareness-building campaigns in particular target both professional and support staff;
- create a supportive working environment by eliminating HIV/AIDS stigma;

- prevent discrimination of employees living with HIV/AIDS and/or their families through appropriate policies and adjustment of benefits and procedures that take into account HIV/AIDS concerns;
  - modify the working conditions of employees exposed to high risk situations which render them vulnerable to HIV infection. A concerted effort should be made not to stigmatise these employees by singling them out, but to address the conditions which expose them to an increased risk of HIV infection; and
  - help staff members and their families cope with AIDS impact and plan for the future through counseling, legal advice, loans, etc.
- iii) **Review and adjust MoA human resource policies and procedures to reflect changes in the institutional and rural environments brought about by HIV/AIDS.** Human resource areas that need to be prioritized include:
- mitigating skill, managerial and professional losses;
  - planning for alternative social security options (such as a health care scheme and a welfare fund to assist staff members with HIV/AIDS and their families);
  - introducing multi-skilling at all levels, and adjustments in training strategies;
  - reviewing and adjusting current administrative procedures, such as terms for sick leave, unofficial leave, and corresponding financial arrangements.
- iv) **Increase flexibility in operational modalities** to accommodate cancellations and postponement of field activities, etc.
- v) **Adjust MoA budgets.** Unless HIV/AIDS is introduced in MoA budgets, it is unlikely that a concerted effort can be made to address the direct and indirect costs of the epidemic on MoA staff and the need for response measures to the epidemic.
- vi) **Build ownership and follow-up into HIV/AIDS MoA initiatives.** Ownership of AIDS impact assessments, of capacity development initiatives and of other response measures is essential but often lacking. For instance, MoAs are usually not actively involved in the design and conduct of research on the impact of AIDS on agriculture and rural communities. Their lack of active participation has meant that the findings of the studies conducted, regardless of their quality, are either not shared with MoAs or not utilized by them. This explains in part why agricultural policies and programmes often do not take HIV/AIDS into account.

**Follow-up** to AIDS impact studies and to pilot initiatives is another critical area of concern. In spite of a number of quality studies on the impact of HIV on agricultural production systems, rural livelihoods and household/community coping mechanisms, concrete initiatives to mitigate AIDS impact in these areas remain scarce. Yet, if a multi-sectoral approach to AIDS is to succeed, **follow-up activities should be given at least as much emphasis (in terms of resources and technical input) as the research or pilot activity itself.** In other words, there is a

need for more emphasis on programming so that HIV/AIDS impact assessments become part of regular MoA programmes.

**b) Adjusting MoA policies, programmes and operations**

HIV/AIDS-induced young adult morbidity and mortality are changing key assumptions upon which agricultural policies, strategies and programmes are formulated. In particular, labour constraints, high dependency ratios within smallholder farm households, and the growing number of households headed by the elderly, youth and women are factors that need to be considered when reviewing agricultural policies.

The following recommendations may help MoAs adjust agricultural policies, programmes and services to the conditions created by HIV/AIDS:

- i) **Adopt an HIV/AIDS mandate.** Adjustments of agricultural policies, strategies and programmes are likely to be conditional to the adoption of an HIV/AIDS mandate endorsed at the highest political level that specifies which effects of HIV/AIDS fall within the mandate of the MoA and how the epidemic affects these.
- ii) **Address rural producer needs and circumstances.** In the pursuit of increased food production, producers and the conditions in which they live and work can be overlooked. Given that HIV/AIDS not only affects agricultural production but also household food and nutrition security and livelihood systems, it is not enough to know which farming systems are vulnerable to labour loss. It is also important to **identify those households and producers that are most vulnerable to food and nutrition insecurity, to prioritize their needs and to explore through which structures the goods and services they require for survival can be delivered.**

Changes in the composition and structure of MoA clienteles brought about by HIV/AIDS (namely, the growing number of elderly, women and children assuming tasks previously performed by young adult men) will need to be taken into account in MoA policies and programmes. In order to address the felt needs, interests and constraints of rural producers, **a shift is needed from a production- to a client-based approach.** The objective should be to bolster the resilience of farm households by helping them to cope with shocks and crises, including HIV/AIDS, and by enhancing household food, nutrition and livelihood security.

- iii) **Address HIV/AIDS as a threat to food, nutrition and livelihood security.** HIV/AIDS is a contributing factor to food, nutrition and livelihood insecurity and should be regarded in the same way as other shocks that befall rural households, such as drought. However, what is of critical importance to MoAs is the fact that, unlike other shocks, HIV/AIDS can be one from which vulnerable households may never recover. The adverse effects of AIDS on the farm household production-domestic labour interface in particular need to be understood in the context of food, nutrition and livelihood insecurity.
- iv) **Factor labour constraints in the formulation of smallholder agricultural policies and programmes.** Smallholder agricultural policies may need to take into account the growing labour constraints associated with

HIV/AIDS and the ensuing potential disruption to the rural economy and social structure. In many countries in sub-Saharan Africa, agricultural policies tend to be premised on intensive food production strategies on the basis of virtually unlimited labour availability. Such assumptions may need to be revisited in view of the scale of the HIV epidemic.

- v) **Factor household coping mechanisms to HIV/AIDS in the formulation of smallholder agricultural policy and research programmes.** Policy recommendations about the relative merits of particular crops in a given farming system should take into account the impact of HIV/AIDS on household labour and income. Research should correspond more closely to the needs of farm households with high dependency ratios and of households headed by the elderly or the young. Equally importantly, there is a need to ensure that crops being promoted are not only less labour intensive but, equally importantly, of high nutritional value.
- vi) **Promote low-risk, low-input strategies and measures for female-headed households, and for households headed by the elderly, youths or orphans.** These may include the reclamation of traditional food crops and open-pollinated maize varieties with a lower input requirement, and improved storage qualities, and inter-cropping of cereals and cucurbits to fix nitrogen and smother weeds, etc.
- vii) **Protect land ownership rights, particularly among women and children.** Issues related to land ownership are of critical importance to households affected by HIV/AIDS. Given that without land these families may be unable to sustain themselves, priority should be given to protecting these rights.
- viii) **Mainstream HIV/AIDS in MoA policies, programmes and operations.** Experience with mainstreaming HIV/AIDS to date reveals that: a) projects should be supported for longer than one year and should preferably be located within “hard” MoA units (such as crop production, agricultural extension, livestock, etc.) rather than “soft” units; b) MoAs should have adequate resources for follow-up activities; and c) stakeholder ownership is critical to the success of mainstreaming efforts.

The following measures may assist MoAs in mainstreaming HIV/AIDS:

- *Incorporate HIV/AIDS in MoA workplans and policy documents.* This is necessary in order for mainstreaming exercises to be sustainable and to ensure that HIV/AIDS is integral to policy and programme design and implementation.
- *Integrate HIV/AIDS in donor-supported MoA initiatives.* If MoAs are to be encouraged to address HIV/AIDS in their core programmes, donor-supported programmes must follow suit or else HIV/AIDS activities will continue to be undertaken on an *ad hoc* basis.
- *Incorporate HIV/AIDS in the curriculum of agricultural colleges and training institutions.* This is necessary to ensure that future recruits of MoAs and partner organizations have the requisite skills with which to address the technical implications of the impact of HIV/AIDS on their work.
- *Introduce HIV/AIDS in agricultural sector networks.* To date, MoAs have been responding to the HIV epidemic in relative isolation. A

number of MoAs have initiated very similar activities, such as the production of IEC materials for agricultural extension workers on the impact of the epidemic. One way to overcome this relative isolation of efforts and the lack of resources is to explore the various networks serving the agricultural sector and to identify a suitable one for the exchange of experiences, data and best practices on agriculture-specific responses to HIV/AIDS. The objective would be to use each Ministry's comparative advantage in the response to the HIV epidemic and to assess the replicability of successful initiatives, identify common needs, develop training capabilities within a common framework and share training materials. The Consultative Group on International Agricultural Research (CGIAR) or one of its affiliates (such as ISNAR) could be one such network through which the impact of HIV/AIDS on the agricultural sector in general and on MoAs in particular could be addressed.

## Glossary of terms and acronyms

<b>AIDS:</b>	Acquired Immune Deficiency Syndrome; the last and most severe stage of the clinical spectrum of HIV-related diseases
<b>ASIP:</b>	Agricultural Sector Investment Programme
<b>CGIAR:</b>	Consultative Group on International Agricultural Research
<b>Dependency ratio:</b>	Population aged less than 15 and over 65 (dependent population), divided by the population aged 15 to 64 (productive population)
<b>FAO:</b>	Food and Agriculture Organization of the United Nations
<b>FEWs:</b>	Field Extension Workers
<b>HIV:</b>	Human Immunodeficiency Virus; a retrovirus that damages the human immune system thus permitting opportunistic infections to cause eventually fatal diseases. The causal agent for AIDS
<b>HIV prevalence:</b>	Total number of persons with HIV infection alive at any given moment in time
<b>IEC:</b>	Information, education and communication programmes
<b>IFAD:</b>	International Fund for Agricultural Development
<b>Incidence:</b>	An epidemiological term which refers to the number of new cases of a disease occurring in a population during a given period of time, usually a year
<b>ISNAR:</b>	International Service for National Agricultural Research
<b>K:</b>	Kwacha
<b>MAAIF:</b>	Ministry of Agriculture, Animal Industry and Fisheries (Uganda)
<b>MAFF:</b>	Ministry of Agriculture, Food and Forestry (Zambia)
<b>MoAaC:</b>	Ministry of Agriculture and Cooperatives (Tanzania)
<b>MoAs:</b>	Ministries of Agriculture
<b>MAWRD:</b>	Ministry of Agriculture, Water and Rural Development (Namibia)
<b>NARS:</b>	National Agricultural Research System
<b>NGOs:</b>	Non-governmental organizations
<b>PLWAs:</b>	Persons living with AIDS
<b>PSC:</b>	Public Service Commission (Uganda)
<b>SADC:</b>	Southern Africa Development Community

## 1. INTRODUCTION

### 1.1 Background

The HIV epidemic has been elevated from the status of a health crisis to that of a **development concern** that affects all sectors (inclusive of agriculture and rural development) and segments of society (urban and rural, rich and poor, and men, women and children of all ages). The magnitude and severity of the impact of the epidemic, according to the Secretary-General of the United Nations, Kofi Annan, has made **HIV/AIDS not just a social and economic problem but a security issue** as well. In January 2000, the UN Security Council went as far as to convene an open debate on the impact of AIDS on peace and security in Africa--the first time that the Security Council has addressed a health crisis as a threat to peace and security.

Given that agriculture is the largest sector in most sub-Saharan African economies, accounting for a significant portion of production and employing a majority of workers, the impact of HIV/AIDS on this sector is of paramount importance to policy-makers. According to recent data from FAO (see Figure 1), AIDS has claimed the lives of about 7 million agricultural workers to date and could kill an additional 16 million (up to 26% of the agricultural labour force) in sub-Saharan Africa by 2020.

In macro-economic terms, the majority of **countries most affected by HIV<sup>1</sup>** are also those most **heavily reliant on agriculture**, and particularly on agricultural exports for foreign exchange needed to pay for raw materials and essential imports for development. For instance, in Malawi, where 87% of the population earns a living from agriculture and about 80% of the country's food comes from subsistence farming, with most smallholder farmers cultivating less than one hectare,<sup>2</sup> adult HIV prevalence is 16%. In Kenya, where between 70-80% of the population earns a living from agriculture and 60% of the food comes from subsistence farming,<sup>3</sup> adult HIV prevalence is more than 11%.

#### Box 1: Ministries of Agriculture in Africa

Ministries of Agriculture in sub-Saharan Africa are among the largest ministries in their countries. Their mandate is to increase food production and ensure food security at household and national levels. At present, many MoAs are in a transition phase from being implementors to being facilitators of development programmes. This has implications for staffing, skill requirements, structure, and relationships to other institutions. MoA clients include smallholder men and women farmers, agricultural workers, commercial agricultural farmers and consumers of agricultural products. MoAs operate at national, district and sub-county level and have a large network of field staff, including agricultural extension staff.

HIV is becoming an issue of increasing relevance to MoAs which are confronted with formidable challenges in coping with epidemic impact. This is because **HIV/AIDS is changing the environment in which MoAs operate by exacerbating existing constraints to agricultural and rural development and by triggering or intensifying structural changes in the sector.**

In spite of these adverse impacts, there is relatively little "hard" data on the effects of HIV/AIDS on MoAs and their work and scarce documentation on how

<sup>1</sup> Excluding South Africa and Botswana.

<sup>2</sup> Bota S, Malindi G and Nyekanyeka M. *Factoring AIDS into the agricultural sector in Malawi. A report based on a survey conducted in some agricultural institutions in Lilongwe*, Ministry of Agriculture and Irrigation, 1998.

<sup>3</sup> GTZ. *Factoring HIV/AIDS into the agricultural sector in Kenya*, 1999.

MoAs are coping with these effects. Given their key role in shaping agricultural policies and programmes and in reaching rural populations (see Box 1), this paper argues that **MoAs can be instrumental in mitigating the adverse effects of the HIV epidemic on livelihood, food and nutritional security and on the agricultural sector** more generally (see also Box 2).

## 1.2 *Purpose, scope and methodology*

The purpose of this paper is to explore the relevance of HIV/AIDS to Ministries of Agriculture and their work in order to identify key issues and appropriate responses that may assist MoAs to:

- cope with the impact of HIV/AIDS on their staff, their clients and their work by adjusting their policies, strategies, programmes and technology focus to the conditions created by HIV/AIDS;
- create an enabling environment for the inclusion of MoAs in development-oriented multi-sectoral responses to the HIV epidemic; and to
- ensure the sustainability of agricultural and rural development efforts.

The paper focuses on selected aspects of the impact of HIV/AIDS on MoAs and analyses some examples of response measures adopted to date. It also proposes responses that are likely to enhance the capacity of MoAs to cope with the effects of the epidemic. Given that the impact of HIV/AIDS has been felt most acutely at the farm household level, the paper focuses on smallholder agriculture. Emphasis is placed on those countries in Eastern and Southern Africa which have been hardest hit by the HIV epidemic. In this context, not all of the issues dealt with below are applicable to Ministries of Agriculture in other parts of Africa, Asia and Latin America. However, the main thrust of the issues reviewed and a number of examples of response measures cited herein are likely to be of relevance, to varying degrees, to most MoAs in developing countries affected by the HIV epidemic.

### **Box 2: Is AIDS the Business of MoAs?**

“Should HIV/AIDS be part of the business of the MoAs?” read a question asked of agricultural extension workers in Malawi. About 97% of participants in a focus group discussion replied that AIDS should be part of the Ministry’s business.

Source: Jennifer Hogle. Factoring HIV/AIDS Prevention & Mitigation Activities into the Programming of SG 2000 in Malawi, Global 2000, The Carter Centre, 1999.

Part of the input to this paper was generated by a **questionnaire on the impact of HIV/AIDS on MoAs and their work** sent to 10 countries in Eastern and Southern Africa through FAO representations in these countries. Eight of these countries were selected on the basis of their high adult HIV prevalence rates, ranging from 13% to 26%. Two other countries (Uganda and Tanzania) with HIV prevalence rates below 10% were also included in view of: a) the adverse impact of the epidemic on their agricultural sectors over the last 15 years; and b) the experience these countries have gained in addressing the effects of the HIV epidemic. The overall objective of the questionnaire was to identify key problem areas that MoAs face as a result of rising young adult morbidity and mortality, and to understand better how MoAs have responded to date. The MoAs of five countries (Namibia, South Africa, Tanzania, Uganda and Zambia) replied to the questionnaire.

It should be emphasized that most examples of response measures to the impact of AIDS reviewed in this paper are neither AIDS-specific nor “new” as such.



In other words, they are not remedial measures to HIV/AIDS *per se*, but responses used to address existing development problems. As such, they may not be applicable in each and every context.

A number of important issues raised by HIV/AIDS for MoAs are not dealt with herein, including policy issues related to commercial agriculture, rural-urban linkages, migration, etc. Further, the paper does not provide a blueprint of MoA response to the impact of HIV/AIDS: each response needs to meet the specific agro-ecological, political, socio-economic and socio-cultural conditions of a particular country (or even district) and the particular stage and pattern of the HIV epidemic in that country. In other words, each MoA needs to prioritize the most pressing concerns raised by the HIV epidemic for its work.

## 2. THE IMPACT OF HIV/AIDS ON THE AGRICULTURAL SECTOR

The **impact of HIV/AIDS on agrarian systems** depends on the structure of the farm sector (especially the smallholder sector), the labour-intensiveness of the farming system and the asset portfolio of smallholder farm households.

The adverse effects of HIV/AIDS on agriculture and rural development are manifested primarily as **loss of labour supply, of on- and off-farm income and of assets**. These can contribute to **reduced productivity, yields and agricultural output**. For example, in Zimbabwe, according to a survey conducted by the Zimbabwe Farmers' Union in 1997, agricultural output in communal areas declined by nearly 50% among households affected by AIDS in relation to households not affected by AIDS.<sup>4</sup> Maize production by smallholder farmers and commercial farms declined by 61% because of illness and death from AIDS.<sup>5</sup> Marketed output of cotton, vegetables, groundnut and sunflower crops were cut nearly in half, and cattle farming declined by almost a third (see Box 3).

### Box 3: Impact of HIV/AIDS on communal agriculture in Zimbabwe

Crops	Marketed Output
Maize	-61%
Cotton	-47%
Vegetables	-49%
Groundnuts	-37%
Cattle Owned:	-29%

Source: Phil Kwaramba, The Socio-Economic Impact of HIV/AIDS on Communal Agricultural Production Systems in Zimbabwe, Zimbabwe Farmers' Union and Friederich Ebert Stiftung, 1997.

**Factors determining the sensitivity of agriculture to labour loss** resulting from AIDS include:<sup>6</sup>

- the seasonality of the demand for labour;
- the degree of specialisation by sex and age;
- the inter-dependence of labour inputs;
- economies of scale in labour; and
- the substitutability of labour-saving technologies.

The combined loss of labour, income and assets is likely to increase food, nutrition and livelihood insecurity, deepen poverty and undermine the resilience

<sup>4</sup> Kwaramba P. *The socio-economic impact of HIV/AIDS on communal agricultural production systems in Zimbabwe*, Zimbabwe Farmers' Union and Friederich Ebert Stiftung, December, 1997.

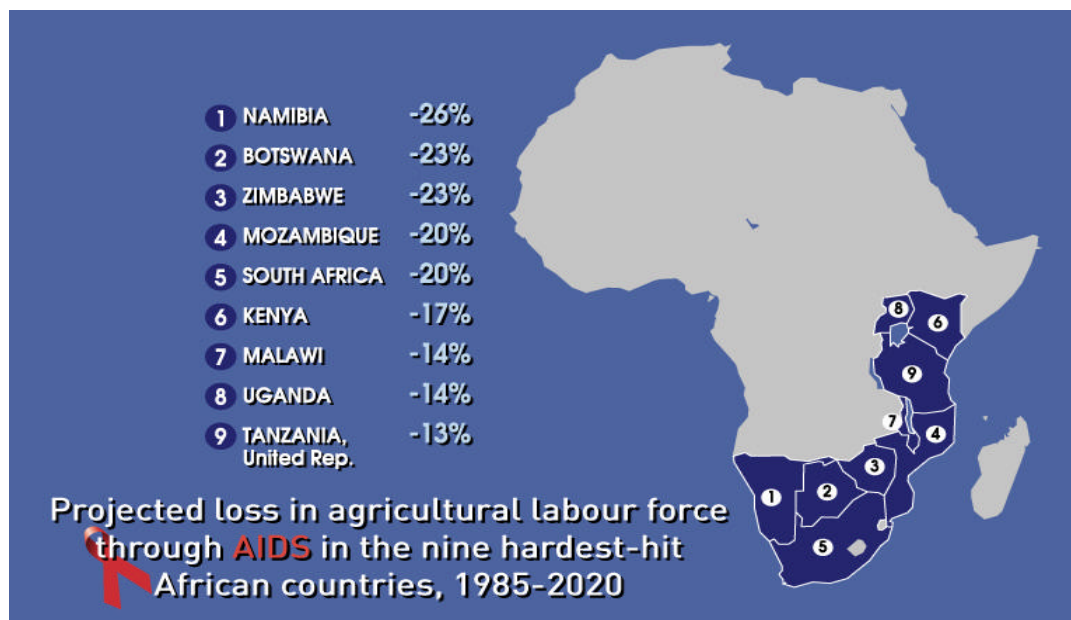
<sup>5</sup> *ibid.*

<sup>6</sup> Gillespie S. *The potential impact of AIDS on food production systems in Central Africa*, FAO, 1988.

and reversibility of household coping mechanisms among some households in the long term. Further, the magnitude of the scale of the epidemic in most countries in Eastern and Southern Africa is contributing to a number of **structural changes in the smallholder sector**, including:

- a) **Long-term changes in farming systems** as household cultivation shifts from cash crops to subsistence crops and from labour-intensive to labour-extensive but often also less nutritious crops. It has been shown, for instance, that in Bukoba District, Tanzania, the intensely managed banana/coffee/bean farming system has been replaced by a labour-extensive, low-input cassava/sweet potato farming system. This change in cropping pattern is unlikely to reverse itself given the heavy investments required in terms of labour, cash, and time—all of which are in short supply in households affected by HIV/AIDS.<sup>7</sup> Evidence from Zambia shows that in the case of livestock farming, few farmers can afford to repurchase a sizeable stock after having sold their animals, and even when they are able to do so, sustaining them is difficult given the paucity of veterinary services in the country.<sup>8</sup>

**Figure 1: AIDS Impact on the Agricultural Labour Force in Eastern and Southern Africa, 1985-2020, FAO, “HIV/AIDS: A Threat to Food Security and Rural Development,” 2000**



- b) **Changes in the age structure and quality of skilled and unskilled agricultural labour**, in view of the growing number of elderly people and children who assume a greater role in farming and the fact that women are increasingly becoming responsible for on- and off-farm tasks previously performed by men. It is not known what the effects of the changes in the age structure and quality of the agricultural labour force will be.

<sup>7</sup> Rugalema G. *Adult mortality as entitlement failure: AIDS and the crisis of rural livelihoods in a Tanzanian village*, 1999, p. 149–150.

<sup>8</sup> Kamwanga J. et al. *Disease, HIV/AIDS and capacity of the agriculture public sector in Zambia: working draft on impressions from the data on mortality and associated capacity implications*. UNAIDS/UNDP, April, 2000, p. 4.

These structural changes in smallholder agriculture are likely to contribute to increased malnutrition and an overall decline in the nutritional status of a growing number of resource-poor farmers, particularly women and children, with far-reaching consequences for the health and productivity of the agricultural labour force.

While HIV/AIDS may contribute to reduced agricultural production at household level, there are also examples of **accelerated agricultural development in spite of AIDS**. Uganda's Minister of Agriculture argued in 1999: "At one time, we feared AIDS might have a dramatic impact on agriculture, but it did not happen".<sup>9</sup> Instead, he indicated, Uganda has seen an impressive boost in agricultural production largely due to **privatisation, better marketing, new cash crops and active farmers' associations**.<sup>10</sup> While this assessment may accurately reflect developments at the macro level, it has been argued that it may not apply at the micro level. "Our agricultural boom does not translate into better food security for rural households", has argued Stella Neema, a researcher with the Institute of Social Research at Makerere University in Kampala.<sup>11</sup> In effect, UNICEF data show that 38% of children in Uganda were stunted and 40% of children under 4 years of age suffered from chronic malnutrition in 1995.<sup>12</sup>

In other words, there can be a **discrepancy between the impact of AIDS on agricultural production at the macro level and household food and nutrition security at the micro level**. The reason for this is the fact that AIDS is responsible for "a divergence in opportunities", according to Gary Howe, Director for East and Southern Africa of the International Fund for Agricultural Development (IFAD). This divergence in opportunities he attributes to the fact that: "A large sector of the population [in Africa] has no access to the new crops and markets, coupled with an acute crisis of labour and [a] tremendous dependence of households on single women and the elderly."<sup>13</sup>

This dichotomy between the impact of HIV/AIDS on agricultural production at the macro level and on household food, nutrition and livelihood security at the micro level needs to be borne in mind when addressing the adverse effects of HIV/AIDS on agriculture and rural development and when designing rural development policies and programmes.

### 3. THE RELEVANCE OF HIV/AIDS FOR MoAs

The relationship between the HIV epidemic and MoAs is bi-directional:

- the HIV epidemic affects MoAs and their work (their clients, staff, services, programmes, etc.);
- MoAs can affect the spread of HIV infection and the impact of AIDS through their policies, strategies and programmes.

This section examines the impact of HIV/AIDS on MoAs and their work, identifies key issues and selected MoA coping mechanisms, and provides examples of response measures. Four areas of HIV/AIDS impact are reviewed:

---

<sup>9</sup> Cited in Sayagues, op. cit., p. 7.

<sup>10</sup> *ibid.*

<sup>11</sup> Stella Neema, Institute of Social Research, Makerere University, Kampala, cited in *ibid.*, p. 9.

<sup>12</sup> *ibid.*

<sup>13</sup> Gary Howe, Director for Africa at IFAD, cited in *ibid.*

- a) MoA staff vulnerability to HIV infection and AIDS impact;
- b) the disruption of MoA operations and the erosion of capacity to respond to the challenges being posed by the HIV epidemic (see Box 4);
- c) the increased vulnerability of MoA clients to food and livelihood insecurity; and
- d) the continued relevance of certain MoA policies, strategies and programmes, in view of the conditions being created by HIV/AIDS (see Box 4).

The findings of this section are summarized in Table 1 below.

#### Box 4: Key Points on the Socio-Economic Impact of HIV/AIDS

The following factors should be borne in mind when analysing AIDS impact in rural areas:

- ❑ What distinguishes HIV/AIDS from other fatal diseases is that: a) **it primarily affects the most productive age group of men and women between 15 and 49 years**—the main breadwinners and heads of households raising families and supporting the elderly—and **their children**; b) its full impact is revealed only gradually (given a median survival period of around 9 years in developing countries); and c) there is no cure while drugs that can prolong life are not available to the large majority of infected people in developing countries.
- ❑ **The stigma attached to HIV/AIDS** is a distinguishing characteristic of the epidemic with adverse consequences for response measures. As a result of this stigma, it is more difficult to address HIV/AIDS than other diseases.
- ❑ **Countries in Southern and Eastern Africa have** increasing urban-to-rural equalization of HIV prevalence. Moreover, given the predominantly rural composition of many of these countries, in terms of absolute numbers, the number of people living with HIV/AIDS may be higher in rural than in urban areas.
- ❑ **The impact of HIV/AIDS is cross-sectoral and systemic.** Agriculture is a dynamic, integrated and inter-dependent system of productive and other components operating through a network of inter-related sub-sectors, institutions and rural households with linkages at every level of activity. The efficiency and effectiveness of each sub-sector, institution and household, depends, to a large extent, on the capacity in other parts of the system. If this capacity is eroded through HIV, then the system's ability to function will be diminished.
- ❑ **The impact of HIV/AIDS on agricultural production systems and rural livelihoods** must be disaggregated into its spatial and temporal dimensions. Geographic and ethnic factors, gender, age, agro-ecological conditions and livelihood strategies play a role on the impact of HIV/AIDS on agricultural production and livelihood systems.
- ❑ **HIV/AIDS disproportionately affects sectors that are highly labour-intensive** or have large numbers of mobile or migratory workers, including agriculture, transportation and mining.
- ❑ The magnitude of the epidemic is such that one can no longer categorise households as afflicted, affected and unaffected. **Nearly all households within a community are likely to be directly or indirectly impacted by the epidemic.**
- ❑ It has been argued that **those rural people whose activities are not counted by standard measurements of economic performance and productivity are among the most vulnerable to the impact of HIV/AIDS.** The effects of the epidemic on the resources, time and labour of those working in subsistence agriculture, in rural households (particularly women) and in the informal sector are for the most part invisible in quantitative terms.
- ❑ **The cost of HIV/AIDS is largely borne by rural communities.** Many HIV infected urban dwellers return to their village of origin when they fall ill. Rural households (particularly women) provide most of the care for AIDS patients. In addition, food, medical care costs and funeral expenses are primarily borne by rural families.
- ❑ **The burden of the socio-economic impact of HIV/AIDS disproportionately affects rural women.** Widows tend to become poorer as they lose access to land, property, inputs, credit and support services. HIV/AIDS stigmatisation compounds their situation further, as assistance from the extended family and the community--their only safety net--is often severed. Widowers tend to re-marry soon after losing their wives, thus cushioning their families from AIDS impacts.
- ❑ **The impact of HIV/AIDS on children is severe** as widespread orphanhood and fosterage are bringing the coping mechanisms of many extended families to breaking point. Withdrawal from school, a decrease in food intake, a decline in inherited assets and less attention from caretakers are among the adverse effects of the epidemic on children.

Source: Adapted from D. Topouzis, The Implications of HIV/AIDS for Rural Development Policy and Programming, UNDP HIV and Development Study Paper, No. 16, 1998; The Socio-Impact of HIV/AIDS on Rural Families in Uganda, UNDP HIV and Development Discussion Paper, No. 2, 1995; and Measuring the Impact of HIV/AIDS on the Agricultural Sector in Africa, UNAIDS paper presented at the African Development Forum, in CD-ROM Economics and AIDS in Africa: Getting Policies Right, 2000.



**Table 1: THE RELEVANCE OF HIV/AIDS FOR MoAs: KEY ISSUES, STRATEGIC QUESTIONS AND EXAMPLES OF RESPONSE MEASURES**

ISSUE	STRATEGIC QUESTIONS	RECOMMENDATIONS
<b>MOA STAFF VULNERABILITY TO HIV INFECTION AND AIDS IMPACT</b>		
<p><b>HIV/AIDS directly affects MoA staff and their families through morbidity/ mortality.</b></p> <ul style="list-style-type: none"> <li>• Staff knowledge and awareness of the epidemic may be inadequate and perceived self-risk of HIV infection may be low.</li> <li>• Stigmatisation and discrimination in the workplace may be present.</li> <li>• Certain categories of MoA staff may be particularly vulnerable to HIV infection (agricultural extension workers, high level professionals and management staff who frequently attend seminars, drivers, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• What is the level of awareness of MoA staff (professional as well as support staff) of HIV prevention, care and support?</li> <li>• What is the perceived self-risk of HIV infection among professional and support staff differentiated by occupational group and gender?</li> <li>• What are the levels of young adult morbidity and mortality in the Ministry?</li> <li>• How much sensitisation on HIV have MoA staff had in the last three years?</li> <li>• How can stigmatisation and discrimination be tackled most effectively?</li> <li>• Which categories of MoA staff are most vulnerable to HIV infection?</li> <li>• How are MoA staff members directly affected by HIV/AIDS coping with the adverse effects of the epidemic?</li> </ul>	<p>Establish AIDS in the workplace programmes in order to:</p> <ol style="list-style-type: none"> <li>i) institutionalise IEC prevention and ensure that awareness-building campaigns in particular target both professional and support staff;</li> <li>ii) create a supportive working environment by eliminating stigma;</li> <li>iii) prevent discrimination of employees living with HIV/AIDS and/or their families through appropriate policies and adjustment of benefits and procedures that take into account AIDS impact;</li> <li>iv) modify the working conditions of employees exposed to high risk situations which render them vulnerable to HIV infection; and</li> <li>v) help staff members and their families cope with AIDS impact and plan for the future through counseling, legal advice, loans, etc.</li> </ol>
<b>DISRUPTION OF MoA OPERATIONS &amp; CAPACITY EROSION</b>		
<p><b>HIV/AIDS disrupts MoA operations as follows:</b></p> <p><b>It reduces productivity</b> through: loss in human resources, absenteeism due to morbidity and funeral attendance, etc.</p> <p><b>It increases MoA expenditures</b> related to HIV/AIDS absenteeism, medical care, burial costs, recruitment and replacement costs, etc.</p> <p><b>It increases staff turnover</b></p> <p><b>It increases the workload of MoA staff</b></p> <p><b>It results in loss of knowledge, skills and experience</b></p> <p><b>SOME IMPLICATIONS</b></p> <p>Severance of key linkages in the organisational &amp; service delivery chain</p> <p>Drain of MoA resources due to the direct/indirect costs of HIV/AIDS are likely to result in less funds for service provision and possibly to a decline in agricultural investment</p> <p>Human resource policies and employee benefits may be inadequate</p> <p>Need for operational adjustments in recruitment, replacement and training procedures, etc.</p> <p>The impact of HIV/AIDS makes it more difficult for MoAs to address their mandate, let alone the challenges posed by AIDS. HIV/AIDS undermines the capacity to deal with the challenges posed by the epidemic, including the planning and administrative capacity of MoAs.</p> <p>Responding to the epidemic requires skills on the part of MoA staff which may not be part of their formal education, training and experience. Thus, even though MoA staff may be confronted with HIV concerns on a daily basis, they may be unable to cope with them.</p> <p>HIV/AIDS compromises the quality, scope and continuity of agricultural extension services.</p> <p>HIV/AIDS depletes the pool of highly skilled and specialised personnel.</p>	<p>Which areas of MoA organisation and service delivery are most affected by young adult morbidity and mortality?</p> <p>How can the disruption of MoA operations be minimised despite absenteeism and loss in human resources?</p> <p>How can the loss of knowledge, skills &amp; experience be compensated for?</p> <p>How can MoAs respond to the rising direct and indirect costs of HIV/AIDS and particularly to health care and burial costs?</p> <p>How can MoA human resource policies be adapted to reflect the changing circumstances of an increasing number of its staff?</p> <p>What kind of health care schemes can be put in place for MoA staff?</p> <p>Is there a need for counseling on HIV/AIDS within MoAs?</p> <p>Can MoA staff affected by the epidemic be assisted with loans?</p> <p>Is there a need to adjust existing policies on sick leave, unpaid leave, etc.?</p> <p>What adjustments in recruitment &amp; replacement policies are needed?</p> <p>What are the effects of the direct/indirect costs of AIDS on the MoA's budget? On the basis of what criteria do MoAs allocate funds for HIV/AIDS-incurred costs versus costs related to regular agricultural programme activities?</p> <p>What are the key human capacity issues raised by the HIV epidemic for MoAs?</p> <p>How does the decreased capacity of MoAs affect food security at household level?</p> <p>To what degree does MoA staff have the technical expertise and communication skills to address the implications of AIDS for its work?</p> <p>How can MoA current structures, functions and operations be adjusted in line with the growing impact of HIV/AIDS?</p> <p>To what extent have young adult morbidity and mortality affected district and national agricultural information systems? To what degree do current MoA data collection variables correspond to the realities created by the impact of AIDS on subsistence agriculture?</p>	<ol style="list-style-type: none"> <li>1. Assess the impact of HIV/AIDS on MoA operations, policies and programmes: <ol style="list-style-type: none"> <li>i) gather qualitative and quantitative data on the direct/indirect costs of the epidemic on MoAs (staff absenteeism, turnover).</li> <li>ii) identify key administrative, managerial and technical posts currently vacant which need to be urgently filled;</li> <li>iii) gather qualitative and quantitative data on the impact of HIV/AIDS on MoA target groups, on farming systems and on food, nutrition and livelihood security.</li> </ol> </li> <li>2. Review and adjust MoA human resource policies and procedures to reflect changes in the institutional and rural environments brought about by HIV/AIDS. Priority human resource include: <ul style="list-style-type: none"> <li><input type="checkbox"/> mitigating skill, managerial and professional losses;</li> <li><input type="checkbox"/> planning for alternative social security options (i.e. health care schemes and welfare funds to assist staff members with AIDS);</li> <li><input type="checkbox"/> introducing multi-skilling at all levels; and</li> <li><input type="checkbox"/> reviewing and adjusting current administrative procedures, such as terms for sick leave, unofficial leave, etc.</li> </ul> </li> <li>3. Capacity development for MoA staff and clients should include sensitisation and training on health-based initiatives as well as on the technical aspects of AIDS impact.</li> <li>4. Increase flexibility in operational modalities to accommodate cancellations and re-scheduling of activities at short notice.</li> <li>5. Adjust MoA budgets to reflect the increase in ministerial expenditures related to the direct/indirect costs of HIV/AIDS, changes in the allocation of resources and the need for response measures to AIDS impact.</li> <li>6. Build ownership &amp; follow-up into HIV/AIDS MoA initiatives</li> </ol>

INCREASED VULNERABILITY OF MoA CLIENTS TO FOOD, NUTRITION AND LIVELIHOOD INSECURITY		
<p><b>HIV/AIDS</b> can constitute a serious threat to smallholder agriculture and to food, nutrition and livelihood security by affecting the productive capacity of farm households.</p> <p>This is felt on many levels, but particularly on access to food through its:</p> <ol style="list-style-type: none"> <li><b>Adverse effects on agricultural production and on land &amp; labour productivity</b> (a reduction in area of land under cultivation; changes in cropping patterns/shift from cash crop to subsistence production; decline in range of crops cultivated; decline in the ability to control pests; loss of soil fertility; decline in crop yields; and loss of agricultural knowledge and farm management skills).</li> <li><b>Increased expenditures and decline in on- and off-farm disposable income</b></li> <li><b>Erosion of farm household resources and asset base</b></li> <li><b>Erosion of knowledge base and skills for agricultural production</b></li> </ol> <p>In Uganda, the MoA reports that HIV/AIDS is contributing to <b>food scarcity in areas hitherto known for food availability and surplus</b>.</p>	<p>Which farming systems are most vulnerable to labour and asset loss? What changes in cropping patterns and livestock management have been observed? How sustainable are adopted coping mechanisms?</p> <p>What are the implications of such changes in farming systems and practices for district national agricultural strategies and for food security at the national level? What are the implications on care and nutrition?</p> <p>What are the technology needs of households headed by the elderly, women and children?</p> <p>How can MoAs identify those households which are most vulnerable to the impact of HIV/AIDS?</p> <p>What are some low-input, low-risk, labour-extensive technologies and/or practices appropriate for both men and women that can be promoted by MoAs to assist vulnerable households?</p> <p>What kind of agricultural production options and survival mechanisms are available to orphans? What are the immediate needs of orphans in terms of food production and security?</p> <p>How can women's and children's rights to land and other assets be ensured to enhance food security among vulnerable households, reduce labour migration, discourage children from leaving school and discourage transactional sex?</p> <p>How can extension services address the needs of vulnerable households and particularly those headed by widows, children and the elderly?</p> <p>How can the livelihood needs of vulnerable households be ensured? In particular, how can the livelihood base of farm households be diversified? How can seasonal fluctuations in production and income be reduced?</p>	<ol style="list-style-type: none"> <li>Adopt a mandate on HIV/AIDS which specifies which effects of HIV/AIDS fall within the mandate of MoAs and how the epidemic may affect these.</li> <li>Address rural producer needs and circumstances, identify vulnerable households and their characteristics, needs and constraints and explore through which structures the goods and services they require for survival can be delivered.</li> <li>Factor HIV/AIDS as a contributing factor to household food and livelihood insecurity.</li> <li>Factor labour constraints in smallholder agricultural policies and services.</li> <li>Factor household coping strategies in smallholder agricultural policies and programmes.</li> <li>Promote low-risk, low-input strategies and measures for female-headed households and for households headed by the elderly and by orphans.</li> <li>Promote land ownership rights, particularly among women and children.</li> <li>Mainstream HIV/AIDS in MoA policies, programmes and operations. The following measures may assist MoA in mainstreaming HIV/AIDS: <ol style="list-style-type: none"> <li>incorporate HIV/AIDS in MoA workplans and policy documents;</li> <li>integrate HIV/AIDS in donor-supported MoA initiatives;</li> <li>incorporate HIV/AIDS in the curriculum of agricultural training institutions;</li> <li>introduce HIV/AIDS in agricultural sector networks to facilitate the exchange of experiences, data and best practices and to identify common needs and develop training capabilities within a common framework.</li> </ol> </li> </ol>
CONTINUED RELEVANCE OF CERTAIN MoA POLICIES, STRATEGIES AND PROGRAMMES TO THE CONDITIONS BEING CREATED BY THE EPIDEMIC		
<p>Production-based approaches may not be as relevant in the context of HIV/AIDS, given that they do not take into account the status and living conditions of the producers (including food security and nutrition).</p> <p>Farm household labour may no longer be an abundant, inexhaustible resource.</p> <p>Farm household typologies upon which agricultural policies and programmes are designed may no longer be valid.</p>	<p>How do agricultural sector policy documents address the relevance of HIV/AIDS for MoA strategies and programmes?</p> <p>How can HIV/AIDS be integrated in divisional workplans and operations?</p> <p>How do MoA policies and strategies reflect the changing conditions and realities of farm households? Does agricultural research and extension strategies reflect the changing needs of rural producers and consumers?</p> <p>Which policies, strategies and programmes are most labour and capital intensive? How are these responding to labour loss?</p> <p>Which farming and livelihood systems and household types are most vulnerable to labour and capital shortages?</p> <p>How can current food production strategies take into account the needs, interests and constraints of households headed by women, the elderly and youths?</p>	



### 3.1 *MoA staff vulnerability to HIV infection and AIDS impact*

MoA staff and their families are directly affected by the HIV epidemic through HIV/AIDS-related morbidity and mortality. Levels of HIV/AIDS prevalence among MoA staff are likely to be at least as high as national average estimates. This would translate into prevalence rates of nearly 36% within the Ministry of Agriculture in Botswana, 25% in Swaziland, 23% in Lesotho, and just under 20% in Zambia and Namibia. Preliminary evidence shows that in Kenya's MoA, 58% of all deaths in the last five years have been AIDS-related.<sup>14</sup> In Malawi, at least 16% of the staff of the Ministry of Agriculture and Irrigation (MoAI) are living with HIV/AIDS, 76% have lost at least one colleague and 60% have lost at least one close relative to AIDS.<sup>15</sup>

Relatively little is known about the impact of the epidemic on MoA professional and support staff and on how these are coping. According to the MAAIF in Uganda, "support staff has fared even worse than professional staff [in terms of HIV/AIDS impact]: their low income and need to supplement their earnings by seeking favours, which are sometimes paid back through unprotected sex, has made them particularly vulnerable to HIV infection."<sup>16</sup>

#### 3.1.1 **MoA staff knowledge and awareness of HIV/AIDS**

It is commonly assumed that government staff in countries heavily affected by the epidemic has adequate knowledge of HIV prevention, care and support. However, such assumptions may be misleading, as **HIV/AIDS awareness-building exercises are often one-off events** that may only target some of the staff. In particular, **support staff may not be included** in such exercises. Moreover, more emphasis is often placed on HIV prevention rather than on care and support and on coping with AIDS impact.

A case in point is Malawi where an impact assessment survey found that knowledge of HIV/AIDS among MoAI staff was far from adequate: While 66% of survey respondents knew that HIV/AIDS was preventable, 9% believed this was not the case while about 25% were not certain. The survey also found that 70% of the respondents felt relatively safe from HIV infection. Among female technical employees in particular, more than 80% felt that HIV infection was not a serious risk. However, among female industrial employees, 42% felt they were at considerable risk.<sup>17</sup> These findings show that: a) the perceived self risk of HIV infection was very low in the ministry; b) awareness and knowledge of the epidemic may not be sufficiently internalised; and c) certain categories of employees may be more vulnerable to HIV infection than others. Lastly, it is likely that certain categories of MoA staff (such as drivers, messengers and other support staff) are not being reached by information, education and communication (IEC) campaigns.

#### 3.1.2 **Attitudes toward HIV/AIDS within MoAs: stigmatisation and discrimination**

In a number of countries, MoA staff attitudes toward HIV/AIDS may not be characterised by tolerance, acceptance and supportiveness as commonly assumed.

---

<sup>14</sup> GTZ. *Factoring HIV/AIDS into the agricultural sector in Kenya*, 1999.

<sup>15</sup> Bota, Malindi and Nyekanyeka. *op. cit.*, p. 7.

<sup>16</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

<sup>17</sup> Bota, Malindi and Nyekanyeka. *op. cit.*, p. 13.

In particular, AIDS stigmatisation may be widely prevalent. This is partly reflected in the fact that AIDS is rarely acknowledged as a cause of death even in countries that are “open” about the epidemic, such as Uganda. While the degree of stigmatisation may vary widely from country to country, AIDS stigma is a key constraint in confronting the epidemic: in particular, it may deeply affect working relationships, staff performance and morale and may undermine efforts to mitigate its effects.

Negative attitudes toward MoA staff living with HIV/AIDS and their families have important implications: asymptomatic staff may be reluctant to disclose their status early in fear of losing their jobs; staff living with AIDS may be discriminated against in the workplace and may be forced to retire at a time when they need the income most; and staff with family members living with HIV/AIDS may live in fear of the consequences of being “found out.” Anecdotal evidence on discrimination in the workplace is abundant but no systematic analysis has been undertaken of discrimination in MoAs.

### 3.1.3 MoA staff exposed to high risk situations

There are certain categories of MoA staff that may be particularly vulnerable to HIV infection. These would include mobile professional and support staff who need to travel in order to carry out their duties: **agricultural extension workers, high level professionals who frequently attend seminars, conferences and in-service training as well as drivers.** These groups often have to spend extended periods away from their homes and families.

An impact assessment conducted by the Ministry of Agriculture and Irrigation of Malawi found that among MoA male staff, drivers, supervisors, middle and top managers were most vulnerable to HIV infection. Among female staff, messengers and secretaries were perceived to be most vulnerable. Reasons given for this increased vulnerability included: i) the fact that these jobs required frequent travel to the field, which separated employees from their spouses for prolonged periods of time; ii) better-off male staff were more likely to have more than one sexual partners; iii) worse-off female staff were more likely to offer sex for money.<sup>18</sup>

#### Box 5: Strategic Questions on MoA Staff Vulnerability to HIV Infection and AIDS Impact

- What are the levels of young adult morbidity and mortality in the Ministry?
- What is the perceived self-risk for HIV infection among professional/support male/female MoA staff?
- Which categories of MoA staff are most vulnerable to HIV infection? How can the working conditions that expose staff to high risk situations be modified?
- What is the level of awareness of MoA staff (professional/support, male/female staff) of HIV prevention, care and support?
- How much sensitisation on HIV/AIDS has MoA staff had in the last three years? Has sensitization extended to support staff?
- How can stigmatisation and discrimination be tackled most effectively?
- How is MoA staff directly affected by HIV/AIDS coping at the workplace and at home?

---

<sup>18</sup> *ibid.*, pp. 11-12.

### 3.1.4 Response Measures

#### **Integrated HIV/AIDS workplace programmes**

Few MoAs have HIV/AIDS workplace programmes that extend beyond HIV prevention. Issues relating to care and support of persons living with HIV/AIDS and/or their families tend to be dealt with on an *ad hoc* basis while working conditions continue to be the same. Integrated AIDS workplace programmes are needed to:

- a) institutionalise IEC prevention initiatives and ensure that awareness-building campaigns in particular target both professional and support staff;
- b) create a supportive working environment by eliminating the stigma surrounding HIV/AIDS. It cannot be emphasised enough that as long as HIV/AIDS stigma is present, it is unlikely that an enabling environment can be put in place to address the vulnerability of MoA staff to HIV infection and AIDS impact;
- c) prevent discrimination of employees living with HIV/AIDS and/or their families through appropriate policies and adjustment of benefits and procedures that take into account AIDS impact;
- d) modify working conditions of employees exposed to high risk situations which render them vulnerable to HIV infection (i.e. align duty station and home bases so that MoA staff does not work in one area and live in another; limit the number of overnight stays required of MoA staff during duty travel, etc.). A concerted effort should be made not to stigmatise these employees by singling them out but to address the conditions which expose them to an increased risk of HIV infection.
- e) help staff members and their families cope with AIDS impact and plan for the future through counseling, legal advice, loans, etc.

There are a number of guidelines for developing workplace policy and programmes on HIV/AIDS, including one developed by the Community Agency for Social Enquiry (CASE) in South Africa.<sup>19</sup> Such guidelines can assist MoAs in defining the concerns of their employees; identifying the responsibilities of managers, employees and supervisors; and prioritising key legal, personnel and policy development issues related to HIV/AIDS.

### 3.2 *Disruption of MoA operations and erosion of capacity*

**HIV/AIDS disrupts MoA operations by severing key linkages in the service delivery chain between MoAs and their clients**, for instance, through its impact on the agricultural extension service. Agricultural extension workers give farm households access to improved agricultural practices, new technologies, improved seeds, etc. In addition, they also provide technical advice on credit, marketing and farm management. In

#### **Box 6: Severance in Service Delivery Chain**

“As Field Assistants, we are the bridge between the government and the rural people, and if the bridge is broken, there is no communication; and if we become sick and [stay] in bed, we cannot carry out our day-to-day duties effectively....”

Male Extension Focus Group Discussion, cited in J. Hegle. Factoring HIV/AIDS Prevention and Mitigation Activities, 1999.

<sup>19</sup> Sarah Davies, Margie Schneider, Grace Rapholo, David Everatt. Guidelines for Developing a Workplace Policy and Programme on HIV/AIDS and STDs. South Africa Department of Health/CASE, March 1997.

many rural areas, agricultural extension workers are the only contact farmers have with support services (see Box 6). When they fall sick or die, **rural communities lose access to extension advice and services when they need them most.**<sup>20</sup>

Further, extension workers are often responsible for collecting data for district MoA information systems. Prolonged illness and death among extension workers may thus result in **gaps in MoA district data collection systems** and in data bases on the basis of which agricultural policies, strategies and programmes are designed.

HIV/AIDS also impacts on MoAs at the **organizational level** by claiming the lives of highly qualified staff who may be difficult to replace. Many such civil servants have been trained abroad, have a long record of professional experience and may have specialized in areas that are not easy to fill in. Their demise is more than just a loss in staff: it can create a **vacuum in the structural organization of an MoA**. According to the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) in Uganda, the loss of senior administrators has often left significant gaps in the structure of the Ministry.<sup>21</sup> HIV/AIDS has also contributed to the elimination of the post of County Extension Coordinator (CECs are officers-in-charge of counties and district Subject Matter Specialists who provide technical back-up and support supervision to extension workers) because in a number of counties CEC positions were vacant for a prolonged period of time. Given that the skills of supervisors are often derived from many years of experience, the loss in output due to HIV/AIDS is likely to be much greater than that measured by their wage.<sup>22</sup>

For MoAs, as for other Ministries and rural institutions, erosion of capacity translates into a diminished capability to deliver services, to cope with crises (inclusive of HIV/AIDS), and to function as organizations. In other words, the impact of the epidemic makes it even more difficult for MoAs to address their mandate, let alone the challenges posed by HIV/AIDS.

In addition, addressing the effects of the HIV epidemic requires skills on the part of MoA staff which may not be part of their formal education, training and professional experience. Thus, even though MoA professionals may be confronted with HIV on a daily basis, they may be unable to cope with the **technical challenges posed by the epidemic**. In Zambia, it has been reported that increased adult morbidity and mortality among senior MoA staff has “definitely affected the **planning and administrative capacity** of the MoA to implement agricultural programmes”, according to the Ministry of Agriculture, Food and Forestry (MAFF).<sup>23</sup>

Few countries in sub-Saharan Africa have systematically assessed the impact of HIV/AIDS on their Ministries of Agriculture and their work. In Zambia, a UNAIDS/UNDP initiative in the MAFF has, since 1999, been collecting data on increased MAFF absenteeism, mortality among staff members, funeral and associated costs, staff turnover and causes of death and absenteeism.<sup>24</sup> A similar

---

<sup>20</sup> It should also be pointed out, however, that extension services only reach a fraction of subsistence farmers (about 30% in Malawi for instance).

<sup>21</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs, March 2000.

<sup>22</sup> Cohen D. *Human capital and the HIV epidemic* UNDP HIV and Development Programme, May 2000.

<sup>23</sup> MAFF. Response to the FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs, May 2000.

<sup>24</sup> This is part of the UNDP-supported HIV/AIDS Mainstreaming Programme, see MAFF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000. This paper has incorporated some of the preliminary findings of the UNAIDS/UNDP study, entitled *Disease, HIV/AIDS and capacity of the agriculture public sector in Zambia: a working draft on impressions from the data on mortality and associated capacity implications*, UNAIDS/UNDP, April 2000, with the permission of the author.

exercise has been undertaken in Malawi with support from UNAIDS and the World Bank.<sup>25</sup> Some of the findings of these assessments are presented below.

### 3.2.1 The determinants of HIV/AIDS impact

This section reviews the main determinants of HIV/AIDS impact on MoA operations and capacity.

#### a) Reduced staff productivity

##### i) *Loss in human resources*

Many MoAs have not systematically analysed the toll of HIV/AIDS-related morbidity and mortality and the extent of disruption of MoA operations due to HIV/AIDS. However, data from the Ministries of Agriculture in Kenya and Malawi as seen above show that the epidemic is exacting a heavy toll.

**Responses to HIV/AIDS-related loss of human resources appear to be *ad hoc* rather than a result of pro-active policies.** For example, MoA staff at headquarters level are usually not being replaced. In Uganda, the Public Service Commission (PSC), which is responsible for recruiting staff for all Ministries, does not replace staff with new recruits, in view of the government's restructuring exercise at Ministry headquarters. This policy has, according to the MAAIF, "covered" staff losses experienced to date.<sup>26</sup> In Tanzania, the Ministry of Agriculture and Cooperatives (MoAaC) similarly indicated that the restructuring exercise within the Ministry has "masked" the problem of staff loss due to HIV/AIDS.<sup>27</sup>

At the field level, the MAAIF in Uganda has responded to the loss of professional staff by re-deploying university graduates at sub-county level. This strategy is reported to pose great challenges in terms of workload and technical proficiency. In Malawi, in order to cope with the loss of staff, the MoAI has contracted 42 retired Field Assistants, 7 veterinary assistants, and 4 Farm Home Assistants to fill in the vacant posts.<sup>28</sup> The effectiveness of this strategy has yet to be determined.

##### ii) *Absenteeism due to morbidity and funeral attendance*

In the mid-1990s, one FAO study found that up to half of agricultural extension staff time in one district in Uganda was lost due to HIV/AIDS. Staff members were frequently absent from work caring for sick relatives or attending funerals. In addition, some staff members had fallen sick themselves.<sup>29</sup> Today, the MAAIF reports that **increased and prolonged morbidity of focal point officers renders the "implementation of certain key activities impossible."**<sup>30</sup> In Malawi, there have been reports of "fisheries field [extension] staff [being] absent to attend funerals half or three quarters of the working days per month".<sup>31</sup> In Namibia, the Ministry of Agriculture, Water and Rural Development (MAWRD) argues: "...[the] increasing absence from duty (with leave) by staff members attending funerals of

---

<sup>25</sup> This initiative developed a toolkit for factoring AIDS into development planning and operations. See Bota, Malindi and Nyekanyeka, op. cit.

<sup>26</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

<sup>27</sup> MoAaC. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, May 2000.

<sup>28</sup> Hegle J. *Factoring HIV/AIDS prevention and mitigation activities into the programming of SG 2000 in Malawi*, Global 2000, The Carter Center, November 1999, p. 4.

<sup>29</sup> FAO. *The effects of HIV/AIDS on farming systems in Eastern Africa*, 1996, p. 73.

<sup>30</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

<sup>31</sup> Hemrich G. *HIV/AIDS as a cross-sectoral issue for technical cooperation: focus on agriculture and rural development*, GTZ, 1997.

relatives [is making it] difficult to have a meeting with all staff present”.<sup>32</sup> The MAWRD in Namibia reports that, frequently, training or field day exercises organized by the Ministry are being postponed due to funerals. “This trend is increasing, and, we, in extension, will have [to have] flexible programmes to accommodate cancellations at short notice, and then reschedule activities also at short notice”.<sup>33</sup>

iii) *Morbidity-related on-the-job fatigue*

While there is no hard information on productivity loss due to on-the-job fatigue related to AIDS morbidity, this could well be significant. According to the MAWRD in Namibia, “during the later stages of the disease [AIDS], the ability [of staff members] to work decreases dramatically. This affects work performance ...”<sup>34</sup>

iv) *Staff demoralisation*

The distress generated by young adult morbidity and mortality in the workplace should not be underestimated as an important factor in reduced staff productivity, operational efficiency and quality of output.

**b) Increase in Ministerial expenditures<sup>35</sup>**

i) *Costs related to HIV/AIDS absenteeism*

HIV/AIDS absenteeism includes the time spent seeking medical treatment by sick staff members, sick leave (exemption from duties on medical grounds), unofficial leave and caring for sick family members. In Swaziland, a government employee may have up to six months sick leave at full pay and then another six months at half pay before becoming retired on medical grounds.<sup>36</sup> In Zambia, the MAFF provides for continuous absenteeism from work up to 90 working days with full salary. Thereafter, the employee is put on half salary for another six months before being asked to retire on medical grounds. However, unlike in the private sector, public sector regulations on these provisions are not strict, so a staff member may be given more time to recover, at full salary, at the discretion of the head of department.<sup>37</sup>

ii) *Medical costs*

In Uganda, as in other countries, the MAAIF has no provision for health funds or insurance for its personnel. Health care costs are treated by the Ministry on a case-by-case basis. As a result, Ministerial resources are re-allocated to provide basic health care support to HIV-infected persons “through humanitarian considerations and cost-benefit considerations by the management”.<sup>38</sup> In Zambia, successive collective agreements between the MAFF and the unions have resulted in a **medical allowance for MAFF staff and their immediate families under special cases** (recurring and complicated illnesses, such as tuberculosis, and conditions requiring specialist treatment). According to this agreement, which does not set a ceiling on the amount to be spent, the MAFF is expected to meet the medical costs as

---

<sup>32</sup> MAWRD. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, May 2000.

<sup>33</sup> *ibid.*

<sup>34</sup> *ibid.*

<sup>35</sup> This section only includes selected costs incurred to MoAs due to HIV/AIDS and is not a comprehensive list.

<sup>36</sup> Whiteside A and Wood G. The socio-economic impact of AIDS in Swaziland, 1994, cited in Bollinger .L. and Stover J. *The economic impact of HIV/AIDS in Swaziland*, The Futures Group International in collaboration with the Research Triangle Institute and the Centre for Development and Population Activities, September 1999, p. 5.

<sup>37</sup> Kamwanga et al., *op. cit.*, p. 12.

<sup>38</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

prescribed by the physician. In some cases, this could even include the cost of treatment and upkeep abroad of senior MoA staff members.<sup>39</sup>

iii) *Burial costs*

Burial costs usually include the purchase of the coffin, the funeral grant, transport costs, subsistence allowances and miscellaneous costs, and represent a significant, unplanned, expense for many MoAs.<sup>40</sup> In Uganda, the deceased are transported to their place of birth with all the attendant expenses, which are usually assumed by the MoA. Similarly, in Malawi, the MoAI is responsible for covering all funeral expenses of deceased staff members, including transporting the body and personal belongings of the deceased. A funeral grant is also given to the family of the deceased.<sup>41</sup> Conversely, in Namibia, staff funeral costs are not assumed by the MoA.

**Box 7: Transport/Fuel Costs of Burials**

Depending on the grade of the officer, the fleet of vehicles could be between five and ten, which includes heavy-duty vehicles such as buses and trucks to ferry mourners. This figure only includes vehicles specifically assigned for the funeral chores, which include, apart from ferrying mourners, collecting firewood, food, etc. It does not include the fleet of vehicles of other well wishers from within the MAFF who make unofficial visits to the funeral house and grave site. In the case of a head of department, for instance, it is almost certain that all the other heads of department would attend.

Source: Kamwanga et al., "Disease, HIV/AIDS and Capacity of the Agriculture Public Sector in Zambia," working draft, *op. cit.*, UNAIDS/UNDP, 2000.

Preliminary findings from Zambia indicate that the total recorded deaths of 936 MAFF staff members from 1990 to 1998 would have cost the Ministry about 2.8 billion Kwacha (K), at an average of K300 000 per death, at the 1999 rate of exchange.<sup>42</sup>

*Funeral grants* are an important component of funeral costs. In Zambia, the MAFF allocates a fixed funeral grant for the death of a serving staff member and his/her nuclear family. In 1999, the grant for a serving staff member amounted to K250 000 while the grant for the death of a member of the nuclear family amounted to K200 000.<sup>43</sup> *Transport and fuel costs* (see Box 7) need to be taken into account for the entire duration of the funeral, and particularly for the period leading to the burial.

iv) *Recruitment and replacement costs/productivity loss after training*

There is little hard information on the costs incurred by MoAs to recruit and replace staff members lost to disease. In Zambia, the MAFF reports: "it is important to note that replacement costs of [certain] officers are very high as it is expensive to offer the specialized training involved and usually this training takes a long time".<sup>44</sup> It has been argued that, in Zambia, the MAFF is among the Ministries with the highest trained professionals.<sup>45</sup> For instance, a Master's degree is required for heads of department while a diploma is the minimum requirement for other professional staff. MAFF professionals spend more time in university (five years for a Bachelor of Sciences in agriculture and six years for a Bachelor's in Veterinary Medicine) than professionals in other fields. The duration of these programmes aside, the science programmes that MAFF professionals pursue are among the most costly: not less

<sup>39</sup> Kamwanga et al., *op. cit.*, p. 10.

<sup>40</sup> *ibid.*, pp. 10-11.

<sup>41</sup> Hegle, *op. cit.*, p. 14.

<sup>42</sup> Kamwanga et al., *op. cit.*, p. 11.

<sup>43</sup> *ibid.*

<sup>44</sup> MAFF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

<sup>45</sup> Kamwanga et al., *op. cit.*, p. 12.

than US\$2500 per year, minus salary, to train an extension officer and US\$3000 per year to train a veterinary doctor. Postgraduate studies undertaken abroad may cost the MAFF between US\$15 000 and \$20 000 a year and between US\$40 000 and \$50 000 for PhDs.<sup>46</sup>

In addition, the cost of holding interviews (hotel costs, sitting allowances for the interview panel, etc.) can be substantial. In Zambia, interview panellists alone earn as much as K90 000 per day per person. If the panel consists of between five and ten individuals who may interview candidates over a period of up to ten days (depending on the number of candidates), then recruitment-related costs can be prohibitively expensive. The recruitment of new staff entails costs toward orientation and retraining, and settling allowances which are equal to one month's salary.<sup>47</sup>

*v) Terminal benefits*

The increase in young adult morbidity and mortality is likely to exacerbate financial pressures on MoAs through the payment of a growing number of terminal benefits to the families of deceased staff.

*vi) Costs incurred to protect the rights of staff members living with HIV/AIDS at the workplace*

The MAAIF in Uganda assumes the cost of transferring staff affected by the epidemic to areas of their choice or of convenience (usually closer to their homes).<sup>48</sup>

Given the significant medical and other expenditures incurred by MoAs as a result of increased young adult morbidity and mortality, certain human resource policies and employee benefits and procedures may be inadequate and in need of review (current sick leave provisions, procedures for processing terminal benefits and emergency advances for the terminally ill, etc.). The MAFF in Zambia has argued that even though it is fully aware of the disruption that HIV/AIDS causes the Ministry, "these concerns have not yet been put in a format to provide policy guidelines for decision-making with respect to HIV/AIDS".<sup>49</sup> This points to the **need to quantify the various AIDS-related costs incurred by MoAs and make them accessible to policy- and decision-makers.**

**c) Increase in staff turnover**

The extent of staff turnover due to increased young adult morbidity and mortality is difficult to assess given the re-structuring exercises undertaken in many Ministries. Nevertheless, anecdotal evidence suggests that staff turnover is high among a number of MoAs in Eastern and Southern Africa.

**d) Increase in the workload of MoA staff**

Given that many staff members who die are not subsequently replaced, the immediate impact of young adult mortality is an increase in the technical workload of staff members at headquarters and fields level alike. For instance, the workload of agricultural extension workers in a number of countries has increased to a point where many are unable to work effectively. While HIV/AIDS is not the only contributing factor, it has certainly exacerbated this trend. Equally important is the increase in the administrative and management workload of MoA staff.

---

<sup>46</sup> *ibid.*

<sup>47</sup> Kamwanga et al., *op. cit.*, p. 12. Many post-graduate degrees, however, are likely to be financed by donors.

<sup>48</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

<sup>49</sup> MAFF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.



**e) Loss of knowledge, skills and experience**

While not easily quantifiable, many of the persons who have succumbed to AIDS have been highly educated, experienced individuals whose knowledge, skills and experience cannot easily be replaced. According to the MAFF of Zambia, “the loss of knowledge, skills and experience has been significant before replacements are found”.<sup>50</sup> In other words, **HIV/AIDS is eroding MoA capacity** not only through losses in human resources but also through the loss of vital technical, administrative and managerial skills. As seen above, coping mechanisms such as the deployment of junior (and thus often less experienced) professionals or retired professionals (a sound short-term strategy which is, however, not sustainable in the long term) do not fully replace the skills and institutional knowledge base that has been lost.

The loss of staff and the corresponding loss of knowledge, expertise and experience **depletes the pool of highly specialized MoA personnel and affects the quality and continuity of MoA services.**

---

<sup>50</sup> *ibid.*

**Box 8: Strategic Questions on the Disruption of MoA Operations and Erosion of Capacity**

- Which areas of MoA organisation and service delivery are most affected by young adult morbidity and mortality?
- How can the disruption of MoA operations be minimised despite absenteeism and losses in human resources?
- How can the loss of knowledge, skills and experience within MoAs be compensated for?
- How can MoAs respond to the rising health care, burial and other costs? Are there any mechanisms that can be put in place to help MoAs cope with such demands?
- How can human resource policies and procedures be adapted to reflect the changing circumstances of an increasing number of its staff affected by HIV/AIDS either directly or indirectly (unofficial sick leave, etc.)?
- What kind of health care schemes can be put in place for MoA staff?
- What mechanisms are in place to educate MoA staff on HIV prevention and care?
- Is there a need for testing and counseling on HIV/AIDS for MoA staff?
- Can MoA staff affected by the epidemic be assisted with loans?
- Is there a need to adjust existing policies on sick leave, unpaid leave, etc.?
- What adjustments in recruitment and replacement policies and procedures are needed to meet the challenges posed by young adult morbidity and mortality?
- What are the effects of the direct and indirect costs of AIDS on MoA budgets? How can MoAs keep their operations functioning as smoothly as possible given the increasing expenditures on HIV/AIDS-related costs? On the basis of what criteria do MoAs allocate funds for HIV/AIDS-incurred costs versus costs related to regular agricultural programme activities?
- What are the key human capacity issues for MoAs raised by the HIV epidemic?
- How does the decreased capacity of MoAs affect food security at the household level?
- What are some alternative mechanisms that can help compensate for MoA capacity loss?
- How can MoA current structures, functions and operations be adjusted in line with the impact of HIV/AIDS?
- To what degree does MoA staff have the technical expertise as well as the communication skills and tools with which to address the implications of HIV/AIDS for its work? Which technical areas/posts of MoAs need capacity development most?
- To what degree do current MoA data collection variables correspond to the realities created by the impact of HIV/AIDS on smallholder agriculture?
- What changes are needed in agricultural extension training in view of the impact of HIV/AIDS?

**3.2.2 Examples of responses****a) Human capacity development<sup>51</sup>**

While this section deals with capacity development directly related to HIV/AIDS, it cannot be emphasized strongly enough that overall capacity development in MoAs is essential if HIV/AIDS concerns are to be addressed. If MoA capacity is severely limited in the first place, it is unlikely that HIV/AIDS-related capacity development initiatives will be effective.

<sup>51</sup> Capacity is the ability of individuals and organisations to perform functions effectively, efficiently and sustainably. The term “capacity development” is preferred to the term “capacity building”; while capacity strengthening is important, so are the retention of existing capacity, improvements in the way in which existing capacity is being utilised and the retrieval of capacity which has been eroded or lost. See Cohen D, *Evaluating HIV and AIDS: why capacity development is central to assessing performance*, UNDP, August 2000, p. 1.

### *i) Sensitisation*

A number of MoAs in sub-Saharan Africa have undertaken sensitisation of senior administrators, district agricultural officers and district subject-matter specialists on HIV prevention, on caring for persons living with HIV/AIDS, and on the effects of the epidemic on the agricultural sector. However, it appears that **sensitisation tends to take place as a one-off event rather than as an on-going process**. As such, it ends up being a goal in itself rather than a means to an end. Once sensitisation is over, there are usually no follow-up activities to build upon the skills and information imparted, such as concrete initiatives on how to integrate HIV/AIDS into divisional/departmental or district level workplans and into MoA budgets. **Lack of funding for follow-up activities** is a major constraint.

### *ii) Training*

Training on HIV/AIDS has been undertaken in a number of MoAs in Southern and Eastern Africa. However, as with sensitisation, training has been largely health-oriented (HIV prevention, etc.) rather than agriculture-specific, and fairly limited in scope. Moreover, training has primarily focused on assisting households directly affected by HIV/AIDS, and particularly on those living with HIV/AIDS, rather than on the survivors and on households indirectly affected by the epidemic. In Uganda, three training booklets have been prepared by the MAAIF: *HIV/AIDS and Nutrition, Feeding Guidelines for People Living with HIV/AIDS*; and a *Training Guide on HIV/AIDS* for agricultural extension workers. Due to a lack of resources, however, subsequent training of MAAIF staff has been limited. Only one training-of-trainers workshop was held for 17 Agricultural Officers, Assistant Agricultural Officers, Veterinary Officers and Fisheries Officers, and three district level training workshops for a total of 83 field extension workers under a UNDP-funded project in 1997 (see below).<sup>52</sup>

The MoAaC in Tanzania has identified **training to strengthen the analytical capability of decision-makers to plan for the socio-economic impacts of the epidemic** on rural households and communities as a key priority.<sup>53</sup> However, even where ministries have identified priority training areas, these often do not materialise due to lack of funding and follow-up.

## **b) Mainstreaming HIV/AIDS in the work of MoAs**

**Multi-sectoral responses to the HIV epidemic in the early 1990s involved primarily the appointment of AIDS Focal Points to mainstream HIV-related activities within MoAs.** In the case of Zambia, the MAFF established a focal point on HIV/AIDS to liaise with key officers of various departments, including the Agricultural Information Service, Human Resource and Administration, and Planning and Cooperatives. This team constitutes the Ministry's HIV/AIDS Committee. At provincial level, formally trained provincial focal point persons on HIV/AIDS coordinate activities in three provinces (Copperbelt, Lusaka and North-Western). They, in turn, liaise with District Focal Point persons who are in charge of executing MAFF initiatives on HIV/AIDS at district level.

HIV/AIDS mainstreaming exercises have had a mixed record. In the case of Zambia, it has been argued that HIV/AIDS focal points in MoAs have had a limited

---

<sup>52</sup> Note from Peter Cwinya, Project Manager a.i. to FAO Uganda, MAAIF, dated 2 May 2000. An additional training of trainers workshop was conducted for 10 Agricultural Officers of the Family Life Education unit in 1999 under the World Bank Sexually Transmitted Infections project.

<sup>53</sup> MoAaC. Response to the FAO questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

impact in mitigating capacity loss.<sup>54</sup> Furthermore, their technical know-how on HIV/AIDS was reported to be in need of improvement and their activities in need of evaluation and adjustment.<sup>55</sup>

Key **constraints** encountered by the MAFF AIDS Control Programme include the following:

- the absence of a mandate on HIV/AIDS;
- the absence of political backing for the HIV/AIDS Focal Points and for the HIV/AIDS Committee;
- the fact that the HIV/AIDS Committee is composed of staff from various departments within the MAFF who have other responsibilities and therefore limited time to devote to HIV/AIDS; and
- lack of resources, and particularly a budget for HIV/AIDS initiatives.<sup>56</sup>

UNDP has been supporting HIV/AIDS mainstreaming exercises in line Ministries (including MoAs) in a number of countries (Botswana, Zambia and Uganda among others). In Uganda, the MAAIF embarked on an HIV/AIDS mainstreaming exercise in the mid-1990s. The Family Life Education (FLE) unit of the MAAIF assumed the role of integrating the Ministry in an expanded national response to the epidemic. One of its initiatives was to integrate HIV prevention and care for affected families into the core activities of the Ministry. According to the MAAIF, mainstreaming has been largely successful due to the following reasons: a) the manager of the FLE unit has been actively involved in the national AIDS Control Programme since 1994; b) a number of senior staff members of the MAAIF have also been involved in the development of the Ministry's strategic plan for the expanded national response to HIV/AIDS; and c) each MAAIF department has a focal point officer responsible for the HIV/AIDS programme.

According to the MAAIF, key constraints to mainstreaming HIV in the ministry include the following: the absence of commitment and support from some heads of departments; the absence of funds; and the brevity of the mainstreaming project (limited to about a year). At present, according to the MAAIF, there is "great need for financial assistance to undertake training, workshops and research".<sup>57</sup> In fact, one of the challenges facing the AIDS Control Programme of the MAAIF when the UNDP project ended was how it would be able to use the training materials it produced once the funding ceased.<sup>58</sup> In effect, as soon as the project ended, the MAAIF had problems training its Field Extension Workers.<sup>59</sup> According to the appraisal report of this mainstreaming project, the perception of the programme being 100% funded by donors inadvertently eroded the ability of the Ministry to sustain the activities in place.<sup>60</sup>

While focal points for AIDS may be useful instruments for mainstreaming, there has been a tendency to situate these within "soft" units, such as the Family Life Education unit in the case of Uganda's MAAIF, rather than within "hard" units

---

<sup>54</sup> See Kamwanga et al., op. cit., p. 7.

<sup>55</sup> *ibid.*

<sup>56</sup> *ibid.*, p. 8.

<sup>57</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, March 2000.

<sup>58</sup> Narathius A and Odongkara F. *An appraisal of the line Ministry-AIDS control programmes*, UNDP HIV/AIDS prevention and poverty reduction programme, Uganda, December 1997.

<sup>59</sup> *ibid.*, p. 26.

<sup>60</sup> *ibid.*, p. 31.

(livestock, crop production, fisheries, agricultural extension, etc.). This identification of the HIV/AIDS focal point with “soft” units can render the mainstreaming of HIV/AIDS within the core areas of MoA work more difficult. In fact, in the case of Uganda, the HIV/AIDS mainstreaming exercise was perceived to be an added-on “project” rather than an attempt to integrate HIV in MoA programmes.

### c) Adjusting MoA budgets

Most countries in Eastern and Southern Africa have so far not included HIV/AIDS in their budgets due primarily to financial constraints. Even without HIV/AIDS, many MoAs face acute financial problems. The MAFF in Zambia reports that: “...it is important to point out from the outset that the current existing resources, especially finances, in the Ministry are so erratic and inadequate that the implementation of most of the agricultural programme activities has virtually stalled. It is difficult, therefore, to perceive how under the current funding arrangements within the Ministry, HIV/AIDS could be effectively addressed”.

Financial pressures are particularly acute at the district level, “where meagre resources are thinly distributed over a wide range of competing needs”, according to the study on the impact of HIV/AIDS on Zambia’s MAFF.<sup>61</sup> The study concludes: “An increase in the incidence of illness and/or death means a corresponding increase in the demand for financial assistance to cover funeral and other related costs. Given the culturally sanctioned reverence for funeral and burial rites among African communities, preference would be given to funeral costs over other financial demands”.<sup>62</sup> In other words, **HIV/AIDS depletes MoA funds earmarked for agricultural service provision and may deplete funds allocated for agricultural investment.**

This raises the following dilemma: given the scarcity of resources in MoAs, funding is needed to initiate and follow-up on pilot HIV/AIDS activities. Yet, HIV/AIDS mainstreaming exercises that have been fully externally funded have ended up being perceived as added-on “projects” with little ownership at the end of the pilot phase. Experience with mainstreaming HIV/AIDS in development programmes also shows that once such projects come to an end, activities virtually cease.

For these reasons, it is important to adjust MoA budgets to reflect the direct and indirect costs of HIV/AIDS and the need for response measures to the impact of HIV/AIDS. Uganda’s MAAIF is perhaps the first MoA to introduce HIV/AIDS into its 2001 budget. This indicates a major shift in approach as HIV/AIDS becomes a factor to be reckoned with at the budgetary level. For, **unless HIV/AIDS features in MoA budgets, it is unlikely that measures to address the HIV epidemic will be introduced in MoA divisional and district level workplans and thus in core agricultural policies, strategies and programmes.**

### 3.3 *Increased vulnerability of MoA clients to food and livelihood insecurity*

The socio-economic impact of HIV/AIDS on rural households and smallholder agriculture, the vulnerability of smallholder farmers to its effects, and the coping mechanisms of households and communities have been explored in some depth over

---

<sup>61</sup> Kamwanga et al., op. cit., p. 13.

<sup>62</sup> *ibid.*

the last decade.<sup>63</sup> For this reason, they are not dealt with in detail here. Suffice it to say that a number of studies have shown that the **impact of HIV/AIDS is most severe on smallholder agriculture**—the primary economic sector and engine of growth of many sub-Saharan African countries—through its effects at the household level. Smallholder agriculture in sub-Saharan Africa relies almost exclusively on family labour—often the only productive resource poor people have.

### 3.3.1 The impact of HIV/AIDS on food and livelihood security

In terms of household food security, HIV/AIDS impacts on the productive capacity of farm households, thus influencing **availability, access and utilization of food** in the following ways:

#### a) Adverse effects on land/labour productivity and on agricultural production

Household **labour quality and quantity** are reduced, first in terms of productivity, when HIV-infected persons fall sick, and later when the supply of household labour declines because of patient care (this burden falls mostly on the women who are also the main food producers in sub-Saharan Africa) and death (see Box 8). For example, in one village in Tanzania, in households with an AIDS patient, nearly 30% of household labour was spent on AIDS-related matters (including care of the patient and funeral duties). If two people were devoted to nursing the patient, as was the case in 66% of recorded cases, the total labour loss was 43% on average.<sup>64</sup>

**The impact of HIV/AIDS morbidity and mortality not only affects labour inputs to farm production, but, more significantly, it disrupts the household production-domestic labour interface<sup>65</sup> by diverting women's labour from regular caring activities to caring for persons living with HIV/AIDS. This can have severe repercussions not only on food production but also on food and livelihood security, health, education (children are often taken out of school), nutrition and family welfare**

#### Box 9: The Impact of HIV/AIDS at the Household Level

No crops have been planted in the last two years in Ana Nansubuga's 3 hectare plot in Masaka district in southern Uganda. Nearby, three brick houses are closed up with boards. Ms. Nansubuga's eight children and their spouses are dead. Most had AIDS. Of 17 grandchildren, five have died of AIDS.

Ms. Nansubuga, 81 years old, looks after 11 children, aged 8 to 14. Relatives took the eldest away when he turned 28 and the land has lain idle since. The children are too young and she is too old to farm.

Ugandan society is patrilineal: the wife moves in with her husband but does not inherit his land. So Ms. Nansubuga's late husband's family will not let her sell the plot. But, because of AIDS, they lack hands to farm it and the children are hungry.

Mercedes Sayagues, "AIDS Hits Uganda's Villagers," *Africa Recovery*, Vol. 12, No. 4, April 1999.

<sup>63</sup> Key studies on the impact of HIV/AIDS on smallholder agriculture include the following: Mutangadura G, Jackson H et al., *AIDS and African smallholder agriculture*. Safaids, 1999; *Responding to HIV/AIDS: technology development needs of African smallholder agriculture*, Report of the Regional Conference for Eastern and Southern Africa, Harare, 8-10 June 1998; Barnett T and Blaikie P. *AIDS in Africa*, London, Belhaven, 1992; Barnett T. *The effects of HIV/AIDS on farming systems and rural livelihoods in Uganda, Tanzania and Zambia*, FAO, Summary Report, 1994; Kwaramba P. *The socio-economic impact of HIV/AIDS on communal agricultural production systems in Zimbabwe*, Zimbabwe Farmers' Union and Friederich Ebert Stiftung, Harare, December 1997; and Rugalema G. *Adult mortality as entitlement failure: AIDS and the crisis of rural livelihoods in a Tanzanian village*, 1999.

<sup>64</sup> Tibaijuka A K. AIDS and economic welfare in peasant agriculture: case studies from Kagabiro village, Kagera Region, Tanzania, *World Development*, 15, 6:963-975, cited in Bollinger and Stover, op. cit., p. 3.

<sup>65</sup> See Topouzis D. *The implications of HIV/AIDS for household food security in Africa*, paper presented at the regional workshop Women's Reproductive Health and Household Food Security in Rural Africa, Economic Commission for Africa, October 1999.

more generally (see Box 9). The illness and death of a young adult woman can have a particularly dramatic effect on the household, given that women provide up to 80-90% of labour and managerial services for smallholdings in rural areas and are the primary care givers.<sup>66</sup>

In the case of crop production,<sup>67</sup> FAO research in Eastern and Western Africa in the early 1990s shows that the impact of HIV/AIDS resulted in one or more of the following consequences:

- a reduction in the area of land under cultivation;
- changes in cropping patterns/shift from cash crops to subsistence production;
- a decline in the range of crops cultivated;
- a decline in the ability to control pests;
- loss of soil fertility;
- a decline in crop yields; and
- loss of crop and farm management skills.

Recent evidence from MoAs in Eastern Africa shows that these early trends continue to prevail. According to the MAAIF of Uganda, in severely affected districts like Rakai and Masaka, up to 25% of households are cultivating less land as a result of the HIV epidemic.<sup>68</sup> A decline in cash crop production, and particularly coffee, which is labour intensive, is also being observed.<sup>69</sup>

More importantly perhaps, Uganda's MAAIF recently reported that AIDS is contributing to **food scarcity in areas hitherto known for food availability and surplus**.<sup>70</sup> In Mansa District, Luapula Province, Zambia, one study revealed that **malnutrition** was perceived to be a major risk in 60% of families affected by AIDS.<sup>71</sup> Another study in Zambia found that the combined effect of drought and AIDS made it difficult for farms to recover from the 1992 drought. This was largely due to the fact that key agricultural tasks, such as planting and weeding, usually undertaken by women, were neglected when women had to care for persons with HIV.<sup>72</sup>

#### **b) Decline in on- and off-farm disposable household income**

HIV/AIDS greatly increases **household expenditures** and adversely affects on- and off-farm income, and especially **the availability of disposable cash** which largely determines the amount and quality of food that can be purchased. Household income declines due to:

- increased expenditures for special foods, medication and treatment, transport to and from health care facilities and funerals (see Box 10). According to a simulation study in Kenya, AIDS costs represented 78% of farm household income during the first year of AIDS impact (with one adult death) and 167% the second year;<sup>73</sup>

---

<sup>66</sup> Forsythe and Rau eds. *AIDS in Kenya: socio-economic impact and policy implications*, 1996, p. 29.

<sup>67</sup> Similar analyses can be undertaken for livestock and fisheries.

<sup>68</sup> MAAIF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, March 2000.

<sup>69</sup> *ibid.*

<sup>70</sup> MAAIF Uganda. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs, March 2000.

<sup>71</sup> Cited in Bollinger and Stover, *op. cit.*, p. 4.

<sup>72</sup> Foster S. Maize production, drought and AIDS in Monze District, Zambia, cited in Bollinger and Stover, *op. cit.*, p. 6.

<sup>73</sup> Forsythe and Rau eds., *op. cit.*, p. 77. This effect does not take into account funeral costs, which can be very high, and other household expenses besides the cost of AIDS treatment.

- the loss of the income of the HIV patient (either in the form of labour or remittances);
- HIV/AIDS stigmatisation that may prevent persons with HIV from continuing to exercise their trade; etc.

In the rural Rakai district of Uganda, for instance, households can spend up to a third of their *annual* cash income on *monthly* medical care or on a *single* funeral. Family assets, such as livestock, land and property, may also be sold.<sup>74</sup> It is worth noting that the drastic reduction in income and productivity often occurs at a time when expenses related to treating the infirm increase exponentially.

#### c) **Erosion of farm household resource and asset base**

The MAAIF in Uganda reports that many affected households sell their food crops in order to cover hospital expenses. Some households even sell off their land to raise money for medical care. In fact, it has been argued that it is becoming increasingly common for some hospitals and clinics to encourage terminally ill patients to surrender land titles as security for medical bills.<sup>75</sup> A World Bank study found that asset ownership declined when an HIV positive household member died, but remained stable when the death was not related to HIV/AIDS.<sup>76</sup> This erosion of the household resource base deprives families of the essential means to sustain themselves. Surviving widows and their children often have great difficulties in retaining family land and other assets which tend to revert to the late husband's family.

#### **Box 10: Burial Costs in Kenya**

Despite many frequent deaths, a number of households feel obliged to dispose of their dead in the traditional way by slaughtering at least one cow to ensure that all relatives who come for the burial ceremony are fed. To serve with the meat, staples and local beer have to be provided for mourners. In the course of showing respect to the deceased, the funeral only worsens the already threatened food security of the bereaved.

Source: A.K. Ayieko, "From Single Parents to Child-Headed Households", UNDP HIV and Development Programme Study Paper No. 7, 1998.

#### d) **Erosion of knowledge base and skills for agricultural production**

Agricultural work is becoming increasingly less attractive in rural areas even among youths who have been brought up in farm households. Conversely, urban centres have been identified with physically less demanding work as well as with higher wages. Given that rural youths spend most of their time in school, their participation in farm work is limited to the peak season. A combination of these factors is contributing to a situation whereby youths are less inclined to make a living off the land and are losing essential skills needed for agricultural production. This is further compounded by HIV/AIDS which has left behind more than 12 million orphans to date in sub-Saharan Africa.

The death of one or both parents to HIV/AIDS often means that younger members of the family may not have the necessary knowledge, experience and management skills to run the farm household. Similarly, if one parent dies, it may

<sup>74</sup> See UNAIDS, *HIV/AIDS epidemiology in sub-Saharan Africa. Fact Sheet 1*, 1996.

<sup>75</sup> Ayieko A K. *From single parents to child-headed households: the case of children orphaned in Kisumu and Siaya Districts*, HIV and Development Programme Study Paper No. 7, 1998, p. 15.

<sup>76</sup> Menon R et al., The economic impact of adult mortality on households in Rakai District, Uganda, in *Confronting AIDS: evidence from the developing world*, 1998, cited in Bollinger L, Stover J and Kibirige V, *The economic impact of AIDS in Uganda*, The Futures Group International, September 1999, p. 4.



be that the surviving parent does not have the skills in farming and/or marketing certain crops.

A study of orphan-headed households in two districts of Kenya that have been heavily impacted by HIV/AIDS recently found that when asked if they knew where to get information on food production, a staggering 82% of the orphans replied in the negative.<sup>77</sup> About 80% of orphan-headed households expressed the need for agricultural assistance and improved practices. Only about 7% of orphan-headed households had adequate knowledge of agricultural production.<sup>78</sup>

**Box 11: Strategic Questions on HIV/AIDS Vulnerability to Food and Livelihood Insecurity**

- Which farming systems are most vulnerable to labour and asset loss? What changes in cropping patterns and livestock management have been observed? How sustainable are the adopted coping mechanisms in the long-term? What are the implications of such changes in agricultural practices and farming systems for district and national agricultural strategies and for food security at national level?
- What are the technology needs of households headed by the elderly, women and children?
- How can MoAs identify and reach those households which are most vulnerable to the impact of AIDS?
- How can the vulnerability of farm households to food, nutrition and livelihood insecurity resulting from the effects of young adult morbidity and mortality (labour/capital shortages and changes in household demographic structure) be reduced?
- What kind of agricultural production options and survival mechanisms are available to orphans? What are the immediate needs of orphans in terms of food production, nutrition and security?
- How can women's and children's rights to land and other assets be enhanced to promote food security among vulnerable households, reduce labour migration, discourage children from leaving school, and discourage transactional sex?
- How can the livelihood needs of vulnerable households be ensured? In particular, how can the livelihood base of farm households be diversified? How can seasonal fluctuations in production and income be reduced?
- How can basic agricultural education be incorporated into elementary and secondary school curricula to ensure that farm operations are maintained by rural households in the face of severe shocks and crises, including HIV/AIDS?

### 3.3.2 Examples of responses

A number of response measures may help to mitigate the impact of HIV/AIDS on farm households, such as:

**a) The introduction of labour- and capital-saving agricultural and household technologies and practices**

These may include:

- early maturing, disease-resistant crop varieties that are easily threshed and pounded and thus require less labour; one example is a new strain of cassava, recently introduced in Uganda by IFAD, which is resistant to mould disease;<sup>79</sup>
- inter-cropping to reduce weeding time;
- integrated pest management to reduce the need for costly chemical inputs;

<sup>77</sup> Ayieko, op. cit., p. 17.

<sup>78</sup> ibid., p. 18.

<sup>79</sup> Sayagues, op. cit., p. 9.

- the promotion of draught power and of improved technologies for animal husbandry;
- zero or minimum tillage to reduce the need for high-cost ploughs and oxen;
- the introduction of farm equipment that can be used by women, the elderly and youths (i.e. lighter ploughs and planters with modified hoes);
- appropriate technologies for food preparation (i.e. efficient stoves) and for water and fuel collection (water points, etc.); and
- labour-sharing arrangements.<sup>80</sup>

One example of a project promoting labour- and capital-saving technologies is the Zambezi Valley Organic Cotton Project, supported by the Zimbabwean non-governmental organization African Farmers' Organic Research and Training (AFFOREST). Many AIDS widows have joined the project because organic cotton has few, if any, external input costs and a lower labour requirement than conventional farming.<sup>81</sup> An analysis of input costs during the 1997-98 season in the Zambezi Valley showed that organic cotton farmers could save more than Z\$200 per acre, compared with conventional cotton growers. In addition, while conventional cotton farmers spent more than 15 hours per week on operations connected with pesticide use, including purchase from the supplier, organic farmers spent 1-2 hours per week scouting for pests and predators.<sup>82</sup>

Small differences in gender roles and in resources among households and communities can influence how effectively households respond to the epidemic. For example, the burden of caring for HIV/AIDS patients usually falls on women and children, who otherwise would be engaged in farming or other productive work or be attending school. An FAO study found that whether women are allowed to ride bicycles and whether bicycles are available can be an important determinant of the marketing capacity of an affected household or community. Gender roles also influence the continuation or adoption of labour-saving responses, such as the use of oxen or access to land and/or credit.<sup>83</sup>

#### **b) The enhancement of household income-generating capacity**

Enhancing income-generating capacity is critical in mitigating the impact of HIV/AIDS on rural households. It can make important contributions to household survival by helping to maintain expenditure patterns. Income-generating capacity can be enhanced in various ways, such as through **micro-credit**. In Uganda, one such project gave micro-grants of about US\$100 to 30 families or to a group of people living with HIV/AIDS to finance low-input income-generating activities, including gardening and fishmongering.<sup>84</sup> Another way to enhance income-generating capacity is to build the asset buffer of households by expanding their opportunities to own livestock and by protecting existing herds through veterinary care.<sup>85</sup>

<sup>80</sup> Mutangadura G, Mukurazita D and Jackson H. *A review of household and community coping responses to the HIV/AIDS epidemic in the rural areas of sub-Saharan Africa*, UNAIDS Best Practice Paper, June 1999, p. 25.

<sup>81</sup> See Topouzis D and du Guerny J. *Sustainable agricultural development and vulnerability to the AIDS epidemic, FAO/UNAIDS Best Practice Paper*, December 1999, Case Study #5: The Zambezi Valley Organic Cotton Project in Support of HIV/AIDS Vulnerability Reduction, pp. 44-52.

<sup>82</sup> *ibid.*, p. 49.

<sup>83</sup> Barnett T. *The effects of HIV/AIDS on farming systems and rural livelihoods in Uganda, Tanzania and Zambia*, FAO, 1994.

<sup>84</sup> See Mutangadura, Mukurazita and Jackson, *op. cit.*, pp. 25-26.

<sup>85</sup> *ibid.*, p. 26.

**c) The promotion of women's and children's rights to land and other property**

As seen above, land ownership becomes critically important, particularly when male heads of household die after long and costly illnesses, often leaving their wives and children without resources. Securing land ownership rights for women and children, in collaboration with other Ministries and institutions, can help to ensure that vulnerable households are able to support themselves. In view of the complexity of land tenure systems in many parts of Africa, this issue needs to be reviewed in depth if viable solutions are to be found.

**d) Apprenticeship schemes and agricultural skills training for adolescents**

In view of the loss of agricultural knowledge, skills and practices among orphan children and adolescents described above, it is essential that apprenticeship schemes and training in farming skills are organized to enable the younger generation of survivors cope with AIDS impact in the long-term. Through such programmes, orphans can enhance their livelihood options and acquire skills that will enable them to support themselves as well as their siblings. The NGO Uganda Women's Effort to Save Orphans has developed apprenticeship programmes for out-of-school adolescents with considerable success. Orphans receive on-the-job training and earn as they learn. After the training, they are introduced to business enterprise management and subsequently loaned money to start their own businesses. Such efforts need to be expanded and replicated.

**3.3 Are MoA policies, strategies and programmes still relevant?**

**3.3.1 The implications of HIV/AIDS for MoA policies, strategies and programmes**

"Any development programme that does not deliberately address HIV/AIDS is bound to fail as the benefits that may be perceived in the programme could potentially be overwhelmed by the negative impact of HIV/AIDS", reports the MAFF of Zambia.<sup>86</sup> The MAFF indicates that in the process of implementing the Agricultural Sector Investment Programme (ASIP), it has been recognized that HIV/AIDS is a cross-cutting problem that needs to be integrated in the overall programme. However, there is no mention of the impact of HIV/AIDS on sector policies in MoA policy documents.

This section shows how the relevance of some MoA policies and strategies can be called into question by the conditions being created by the HIV epidemic.

**a) The limitations of a production-oriented approach**

The impact of HIV/AIDS on rural livelihoods can be such that it may neutralize household efforts to boost agricultural production—a key objective of MoAs. According to Uganda's MAAIF, the focus of its agricultural policies is on generating technologies and providing services to ensure improved quality and quantity of agricultural produce and products for domestic consumption, food security and export. The **status and living conditions of the producers** *per se*, however, have not been addressed. The MAAIF recognizes that it needs to formulate policies and develop programmes that address the human factor of production, i.e. the quality of life of the producers, inclusive of the impact of HIV/AIDS thereupon.<sup>87</sup> This will necessitate a **paradigm shift from a production-**

<sup>86</sup> MAFF. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

<sup>87</sup> MAAIF Uganda. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs, March 2000.

**Box 12: Strategic Questions on the Relevance of Agricultural Policies, Strategies and Programmes to the Conditions Created by HIV/AIDS Impact**

- How do agricultural sector policy documents address the relevance of HIV/AIDS impact for MoA strategies and programmes?
- How can HIV/AIDS be integrated in divisional workplans and operations?
- What are the implications of MoA policies, strategies and programmes for farm labour?
- Which farming and livelihood systems are most vulnerable to labour and capital shortages?
- Which types of farm households are most vulnerable to labour and capital shortages?
- How can agricultural/rural development strategies address the human factor in production?
- How can current food production strategies take into account the needs, interests and constraints of female-, child-, and elderly-headed households?
- What structural changes are needed within MoAs to facilitate the shift toward a client-based approach?
- How can the conditions created by HIV/AIDS (young adult morbidity and mortality, changes in household demographic structure, etc.) become an integral part of the design and implementation of MoA core policies, strategies and programmes?

**to a client-based approach** in which MoA policies, programmes and strategies reflect the economic and social changes in the rural environment (including market liberalization, privatization, HIV/AIDS and other shocks, etc.) as well as the evolving needs, constraints and living conditions of their clients, including their health and nutritional status. While the need for a client-based approach goes beyond AIDS impact, the epidemic does lend more urgency for such a shift in approach.

**b) Farm household labour: an abundant resource?**

A number of farming systems being promoted across sub-Saharan Africa are based on the premise that there is an abundant, near inexhaustible supply of labour (and particularly female labour). Given the scale of HIV/AIDS, however, this can no longer be assumed to be the case. In addition, the value of so-called “unskilled” labour in agriculture has been greatly underestimated. What is commonly thought of as “unskilled labour” has accumulated location- and task-specific skills that can be hard to replace.<sup>88</sup> As the rural exodus is a major concern of many MoAs, the additional loss of labour due to HIV warrants some attention: urban labour shortages can be replaced with migrant labour, but labour shortages in many rural areas may be more difficult to compensate for.

**c) Changing farm household typologies**

Current farm household typologies upon which agricultural policies and programmes are designed may no longer be valid. The parameters of vulnerability of rural households, farming systems and rural livelihoods are changing as a result of HIV/AIDS-induced young adult morbidity and mortality and the subsequent shifts in household demographic structure. Moreover, given the changes in composition of MoA clienteles (with increasing numbers of elderly, youth and women-headed households), existing extension strategies may not correspond to field realities.

---

<sup>88</sup> Cohen D, op. cit.

### 3.3.2 Multi-sectoral responses to HIV/AIDS

Multi-sectoral responses initiated in the 1990s were intended to address the cross-sectoral impact of the HIV epidemic and, in the case of agriculture and rural development, to help rural institutions and other organizations cope with the impact of the epidemic on their work. While a number of countries in Eastern and Southern Africa adopted **multi-sectoral responses that included MoAs, response measures to HIV/AIDS within MoAs have been largely health-dominated**. This is partly due to the fact that in practice, **HIV/AIDS is still primarily situated within a health-dominated paradigm** and is perceived to be far removed from the core work of Ministries of Agriculture.

For example, in Uganda, the AIDS Control Programme of the MAAIF aims to:

- strengthen HIV/AIDS education in order to halt its spread among the staff and the farmers and fishermen they serve;
- help infected and affected persons cope with HIV/AIDS; and
- mitigate the adverse socio-economic effects of HIV/AIDS through the promotion of profitable agro-enterprises which are labour-, energy- and time-saving.<sup>89</sup>

It appears, however, that more emphasis has been placed to date on the first two objectives, and particularly on information, education and communication (IEC) initiatives, and less attention has been paid on mitigating the adverse effects of HIV/AIDS through core agricultural initiatives.

In Tanzania, the MoAaC, with support from UNAIDS, has recently finished implementing a one-year pilot project in four regions (Iringa, Mbeya, Rukwa and Ruvuma) to help address the impact of HIV/AIDS on the Ministry and its work.<sup>90</sup> This project has similarly focused primarily on health-oriented IEC activities.

Multi-sectoral responses in MoAs have had limited success in going beyond a health-dominated focus to the HIV epidemic due to a number of reasons, including the following:

- a) Many **MoAs have not assessed for themselves the effects of the HIV epidemic on their work and/or on the agricultural sector**. For this reason, they have been unable to pinpoint how their work has been affected and how agricultural and rural development policies need to be adjusted. MoAs may be aware of existing HIV/AIDS impact assessments on agriculture/rural development. However, as the MoAaC in Tanzania indicated, “The Ministry was **not involved** [in such studies]”. The question of **ownership** of impact assessments and of multi-sectoral responses to the HIV epidemic is critical but all too often neglected. This is because impact assessments undertaken by bilateral agencies, UN agencies and NGOs have usually not actively involved MoAs. In turn, MoAs do not make use of these studies. As a result, according to the MoAaC in Tanzania: “the Ministry does not have sufficient evidence (facts) to justify the review of current [agricultural] policy”.<sup>91</sup>

---

<sup>89</sup> *Training guide on HIV/AIDS for agricultural extension agents, AIDS control programme, MAAIF Uganda, August 1997, p. i.*

<sup>90</sup> MoAaC. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, April 2000.

<sup>91</sup> *ibid.*

- b) **The absence of MoAs from multi-sectoral HIV/AIDS initiatives.** For example, in March 2000, Zambia established a National Council and Secretariat on HIV/AIDS/Sexually Transmitted Diseases and Tuberculosis – a body designed to advocate effective multi-sectoral approaches for the prevention of HIV transmission, care and social support, as well as for impact mitigation. The Cabinet Committee of this body includes the Ministers of Mines and Minerals Development, Health, Education, Communications and Transport, Presidential Affairs and Information and Broadcasting Services.<sup>92</sup> The MAFF appears to be absent from this multi-sectoral effort.

Adopting a **multi-sectoral response** to HIV/AIDS does not merely entail the introduction of HIV/AIDS focal points and HIV prevention/IEC activities in Ministries of Agriculture and other Ministries. Nor does it only mean adding HIV/AIDS-specific initiatives, or, more generally, public health initiatives on to existing programmes. It also entails **incorporating the developmental implications of HIV/AIDS into core agricultural policies, strategies and programmes**. For this reason, **a shift is required toward a developmental paradigm of response to the epidemic that complements health-based initiatives with core agricultural initiatives**.

Multi-sectoral responses to HIV/AIDS have not yielded concrete and tangible results to date. This is partly because they involve lengthy processes that require considerable financial and human resources, political commitment at the highest level, extensive networking and collaboration between Ministries. However, this does not necessarily mean that the approach as such is conceptually flawed or dated. Rather, it may mean that more work is required in this area along with a recognition that changes are needed in the way development policy and practice are conducted.

It has been argued that the multi-sectoral response to the epidemic is currently being superseded by a **focused treatment and prevention response** premised on “proven approaches”.<sup>93</sup> According to this view, “this may mean less emphasis on the multi-sectoral approach and greater emphasis on the most promising prevention interventions. The latest phase also includes a sharper focus on the ethical and resource issues associated with new treatment and prevention options, such as anti-retroviral therapy and prevention of maternal-to-child transmission”.<sup>94</sup> Such a focused treatment and prevention approach, however, would have little, if any, role to play within the core work of MoAs.

Figure 2 below depicts the various approaches of response to HIV/AIDS, inclusive of the developmental approach discussed above. In a developmental paradigm of response to HIV/AIDS, the focused treatment and prevention response forms part of the multi-sectoral and public health responses. The issue of the relevance of agricultural policies, strategies and programmes to the conditions being created by the epidemic would be placed into sharp focus in a developmental approach to multi-sectoral responses to HIV/AIDS.

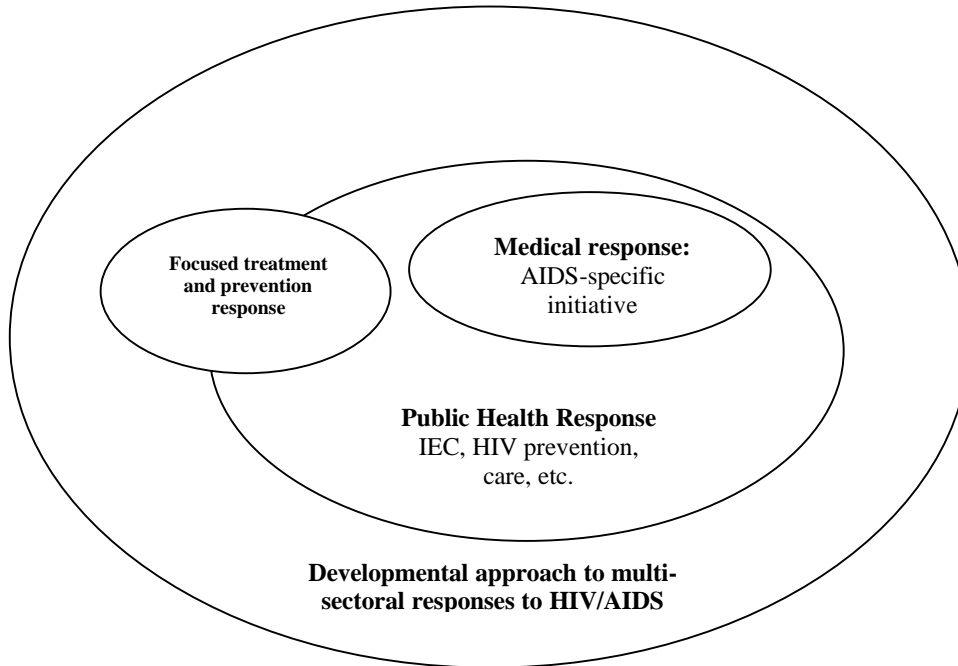
---

<sup>92</sup> UNAIDS Secretariat, Zambia, 16 March 2000.

<sup>93</sup> Stover J and Johnston A. *The art of policy formulation: experience from Africa in developing national HIV/AIDS policies*, The Futures Group, August 1999, p. 20.

<sup>94</sup> *ibid.*

**Figure 2: Conceptual framework of responses to HIV/AIDS**



#### **4. CREATING CAPACITY FOR AN MoA RESPONSE TO HIV/AIDS**

This section summarizes the key issues raised in this paper and proposes policy and operational adjustments to address the adverse effects of the epidemic on MoAs and their work. The recommendations presented below are intended not only for MoAs but also for their partners (donors, NGOs, the private sector, etc.). Given the spatial and temporal pattern of the HIV epidemic, recommendations cannot be generic, but need to be based on country and sector level assessments of capacity and response needed.

More importantly, these recommendations can only translate into action after overall capacity erosion within MoAs is assessed and addressed. Given that day-to-day survival is the over-riding concern for most people in sub-Saharan Africa, long-term policies on HIV/AIDS are often of little relevance to MoA staff and clients alike. Therefore a key issue, which is however beyond the scope of this paper, is the need to strengthen overall MoA capacity. In other words, **it is not only capacity erosion resulting from HIV/AIDS that needs to be addressed, but overall capacity erosion in MoAs. Otherwise, responses to the epidemic are likely to be hampered.** This renders concrete recommendations problematic, for how can remedial measures to HIV/AIDS impact be adopted in a context of extensive MoA capacity erosion?

Four areas of HIV/AIDS relevance to MoAs have been addressed in this paper: a) MoA staff vulnerability to HIV infection and AIDS impact; b) the disruption of MoA operations and erosion of capacity; c) the increased vulnerability of MoA clients to food and livelihood insecurity; and d) the continued pertinence of certain MoA policies, strategies and programmes in view of the conditions created by the epidemic.

Creating capacity for an MoA response to HIV/AIDS requires a two-pronged approach: a) addressing the impact of HIV/AIDS within the Ministry; and b)

adjusting agricultural policies, programmes and operations to the adverse effects of the HIV epidemic.

#### **4.1 Addressing the impact of HIV/AIDS within MoAs**

**HIV/AIDS directly affects MoA staff and their families through morbidity and mortality.** Yet, even in countries with high adult HIV/AIDS prevalence rates, staff knowledge and awareness of HIV/AIDS may be inadequate and perceived self-risk of HIV infection may be low. HIV/AIDS stigmatisation and discrimination in the workplace are present in varying degrees. In addition, certain categories of MoA staff are particularly vulnerable to HIV infection. These include employees who need to travel extensively in order to carry out their duties, such as agricultural extension workers, high level professionals who frequently attend seminars, conferences and in-service training as well as drivers. These groups often have to spend extended periods away from their homes and families.

**HIV/AIDS-related morbidity and mortality disrupts MoA operations and undermines MoA capacity by:**

- a) reducing staff productivity (through loss in human resources, absenteeism due to morbidity and funeral attendance, etc.);
- b) increasing ministerial expenditures (due to costs related to HIV/AIDS absenteeism, medical and burial costs, recruitment and replacement costs, terminal benefits, etc.);
- c) increasing staff turnover;
- d) augmenting the workload of MoA staff; and by
- e) depleting MoA knowledge, skills and experience.

MoA response measures to these impacts have largely focused on human capacity development (sensitisation and training) and on HIV/AIDS mainstreaming. Capacity building efforts to date have largely been limited to health-based, IEC initiatives. In the future, capacity development should encompass the technical aspects of AIDS impact and focus on strengthening the analytical capability of agricultural planners to incorporate the socio-economic impacts of the epidemic into their policies, strategies and programmes.

The following recommendations may assist MoA and their partners to address the adverse effects of HIV/AIDS on MoAs:

#### **1. Assess epidemic impact on MoA operations, policies and programmes.**

Depending on the severity of the impact of HIV/AIDS, this may necessitate one or more of the following activities:

- a) Gather qualitative and quantitative data on the **direct/indirect costs** (medical, burial, administrative, and other costs) **of the epidemic** on MoAs, including staff absenteeism, turnover, etc. for planning purposes. A useful tool with which to quantify the costs of the epidemic may be the **AIDS Impact Calculator**, designed by the South African company “Lifeworks”. This tool, which could be adjusted for MoA use, can determine likely increases in costs of recruitment and training, death, illness and disability benefits.<sup>95</sup> Another useful tool is the **HIV/AIDS Toolkit Template for**

---

<sup>95</sup> Developed for the private sector, the programme uses data collated by managers to estimate projected AIDS prevalence by geographical location, occupation and educational level or salary, and calculates the likely cost increases. It also enables managers to plan and implement the medical management of staff who fall victim to AIDS. See Adding up the AIDS Numbers, *Newsweek* Special Edition: Issues 2001, December 2000-February 2001, p. 41.



**Government Sectors** developed by Abt Associates Inc., and the Health Economics and HIV/AIDS Research Division of the University of Natal in South Africa which has a module specifically on “HIV/AIDS and the Department of Agriculture.” This tool can help MoAs undertake internal and external HIV/AIDS impact assessments.

- b) Identify **key administrative, managerial and technical MoA posts currently vacant** which need to be urgently filled in order to prevent disruption of essential services.
- c) Gather qualitative and quantitative data on the **impact of HIV/AIDS on MoA target groups** through Participatory Rural Appraisal (PRA), on farming systems (through farming systems vulnerability mapping overlaid with HIV/AIDS prevalence rates and impact levels) and on food and livelihood security (through livelihood systems vulnerability mapping that can capture HIV/AIDS impact).<sup>96</sup> Closely monitor changes in the nutritional status of MoA target groups.

## **2. Establish AIDS in the workplace programmes**

AIDS in the workplace programmes can help MoAs address the vulnerability of their employees to HIV infection and AIDS impact (in terms of access to information on HIV/AIDS, safe working conditions, the relevance of workplace benefits and human resource procedures; and the technical capacity of staff to deal with HIV/AIDS concerns in their work). In particular, such programmes should:

- a) **institutionalise IEC prevention, care and support initiatives** and ensure that awareness-building campaigns in particular target both professional and support staff and are conducted on a regular basis;
- b) create a supportive working environment by **eliminating HIV/AIDS stigma and discouraging discrimination of MoA staff living with HIV/AIDS**: as long as stigmatisation and discrimination are present, it is unlikely that an enabling environment can be put in place to address vulnerability of MoA staff to HIV infection and AIDS impact. There is a need for policies and procedures that: break down HIV/AIDS stigma; promote acceptance and support of project staff living with HIV/AIDS; and protect the rights of MoA staff living with HIV/AIDS. These should include provisions for care and support for MoA staff living with HIV/AIDS and their families.
- c) **review and modify working conditions of employees exposed to high risk situations** which render them vulnerable to HIV infection (i.e. align duty station and home bases so that MoA staff does not work in one area and live in another; limit the number of overnight stays required of MoA staff on duty travel, etc.) A concerted effort should be made not to stigmatise these employees by singling them out but to address the conditions which expose them to an increased risk of HIV infection; and
- d) help staff members and their families **cope with AIDS impact** and plan for the future through counseling, legal advice, loans, etc.

---

<sup>96</sup> For more details on farming systems vulnerability mapping and HIV/AIDS as developed by Barnett and Blaikie in the early 1990s and on livelihood systems vulnerability mapping and HIV/AIDS as recently proposed by Topouzis, see D. Topouzis, Measuring the Impact of HIV/AIDS on the Agricultural Sector in Africa, UNAIDS background paper for the Africa Development Forum, 2000 in CD-ROM Economics and AIDS in Africa.

- e) **capacity-building and training in the technical aspects of the impact of HIV/AIDS.** It is often assumed that MoA professional staff are capable of addressing the adverse effects of the epidemic on their work. Yet, MoA professionals may not have the capacity or know-how to respond to the technical implications of HIV/AIDS in their area of expertise (e.g., the implications of labour shortages for agricultural research and extension, etc.). This will require staff training on the impact of HIV/AIDS on rural households and on the linkages between HIV/AIDS and the core technical areas of MoA work and on the implications for programme implementation and/or service delivery (e. g. how to assist households to sustain their productive capacity in spite of labour shortages, asset depletion, and the increased demand for food and income);
- f) appoint an **HIV/AIDS Focal Point** within the MoA to help incorporate HIV/AIDS concerns in the core work of the Ministry. This Focal Point should have concise and agreed upon Terms of Reference which should be familiar to all MoA staff; and
- g) continuous **advocacy** to elicit political commitment for HIV/AIDS at the highest level of the ministry.

As seen from the above, HIV/AIDS workplace programmes need to be defined more broadly than they have been to date to encompass more than IEC HIV prevention initiatives and programmes. The choice of appropriate interventions will vary considerably from country to country. The list of interventions above is meant to provide a broad framework on the basis of which individual MoAs can design HIV/AIDS workplace programmes tailored to their needs.

### 3. **Review and adjust MoA human resource policies and procedures to reflect the changes in the institutional and rural environments brought about by HIV/AIDS.**

In many countries in sub-Saharan Africa, human resource policies and procedures are not the prerogative of MoAs but of other institutions. In the case of Uganda, for instance, human resource policies are the responsibility of the Public Service Commission (PSC). The effects of young adult morbidity and mortality hasten the urgency for closer cooperation between human resource institutions and line Ministries within a multi-sectoral framework so that uniform solutions can be found for all Ministries. Mechanisms are needed to facilitate networking and negotiation between these institutions, in order to expedite human resource policy reforms and procedural adjustments. UNAIDS can play a leading role in putting such mechanisms into operation.

Human resource areas that need to be prioritized include the following:

- mitigating skill, managerial and professional losses;
- planning for alternative social security options, such as a health care scheme (the medical allowance agreement negotiated in Zambia between the MAFF and the unions is one example) and a welfare fund to assist staff members with HIV/AIDS and their families;
- introducing multi-skilling at all levels and adjustments in training strategies;
- reviewing and adjusting current administrative procedures, such as terms for sick leave, unofficial leave, emergency advances, etc.

#### 4. Increase flexibility in operational modalities

Operational adjustments may be needed to minimize disruption of MoA services, such as postponement of training or field day exercises organized by the Ministry due to funerals, caring for sick people, etc. “We, in [agricultural] extension”, reports the MAWRD in Namibia, “will have [to have] flexible programmes to accommodate cancellations at short notice, and then reschedule activities also at short notice.”<sup>97</sup>

#### 5. Adjust MoA budgets

Unless HIV/AIDS is introduced in MoA budgets, it is unlikely that a concerted effort can be made to address the direct and indirect costs of the epidemic on MoA staff and the need for response measures. One of the lessons learned from HIV/AIDS mainstreaming exercises is that despite the valuable work undertaken during the project phase, much of it is lost once the project ends not only because of lack of funding but also because HIV/AIDS has not been incorporated in MoA budgets and workplans.

#### 6. Build ownership and follow-up into HIV/AIDS MoA initiatives

**Ownership** of HIV/AIDS impact assessments, of capacity development initiatives and of other response measures is essential but often lacking. For example, it has been shown that MoAs are usually not actively involved in the design and conduct of research on the impact of AIDS on agriculture and on rural communities. Their lack of active participation has meant that the findings of the studies conducted, regardless of their quality, are either not shared with MoAs or not utilized by them. This explains in part why agricultural policies and programmes often do not take HIV/AIDS into account.

**Follow-up** to HIV/AIDS impact assessments and to pilot initiatives is another critical area of concern. In spite of a number of quality studies on the impact of HIV on agricultural production systems, rural livelihoods and household/community coping mechanisms, concrete follow-up initiatives in these areas remain scarce. Yet, if a multi-sectoral approach to AIDS is to succeed, **follow-up activities should be given at least as much emphasis (in terms of resources and technical input) as the research or pilot activity itself**. In other words, there is a need for more emphasis on programming so that HIV/AIDS impact assessments become part of on-going MoA programmes.

#### 4.2 Adjusting MoA policies, programmes and services

HIV/AIDS can undermine smallholder agriculture and food, nutrition and livelihood security through: a) a decline in agricultural production and land and labour productivity; b) an increase in expenditures and a decline in on- and off-farm disposable income; c) the erosion of household resources and of the asset base; and d) an erosion of the knowledge base and skills needed for agricultural production.

Through these and other effects, HIV/AIDS-induced young adult morbidity and mortality are changing some of the assumptions upon which **agricultural policies, strategies and programmes** are being designed. In particular, labour constraints, high dependency ratios within farm households, the growing number of households headed by the elderly, youth and women and the likely decline in the quality of the labour force (as more children are taken out of school to care for sick

---

<sup>97</sup> MAWRD. Response to FAO/UNAIDS questionnaire on the impact of HIV/AIDS on MoAs and their work, May 2000.

relatives) are among the factors that need to be considered when reviewing the continued relevance of agricultural policies and programmes.

**The content of farm support services** may also need to be reviewed to ensure that various forms of labour substitution, credit and technical assistance are made available to vulnerable households. The development and adoption of appropriate technologies to reduce the time women spend on water and fuel collection, for instance, can be instrumental in releasing labour for agricultural or regular caring tasks. **Applied research** on income-generating opportunities for rural men and women as alternatives to agriculture (especially for those who are no longer able to farm) is also important.<sup>98</sup>

Given the magnitude of the impact of HIV/AIDS, it has been argued that a **paradigm shift** may be necessary for **agricultural research and extension** services in order to put sharp focus on: household food and nutrition security, poverty reduction, and the rehabilitation of the environment.<sup>99</sup> This will require a **gender-balanced, participatory approach and a focus on low-risk, low-input strategies for smallholder agriculture** to ensure that the felt needs and interests of smallholder farm households, and particularly female-headed households and households headed by the elderly and orphans, are met.

The mandate of agricultural extension services may also need to be broadened to encompass HIV/AIDS concerns. A promising methodology for target group HIV prevention and AIDS mitigation has been developed by the Global Integrated Pest Management Facility (IPM) in Asia (Box 12). The FAO Community IPM Programme in Cambodia has extended the **Farmer Field School (FFS)** learning process to HIV/AIDS. Farmer Field Schools use the Agro Eco-system Analysis to analyse crop cycles and their vulnerability to pests. Farmer Life Schools (FLS) use the Human Eco-system Analysis to identify supporting and non-supporting factors as they relate to household and community economy, health, education, social relations, culture and the environment. HIV/AIDS is one of the topics covered.<sup>100</sup> The FLS approach seeks to raise awareness among farmers

**Box 12: From Rice Field Ecology... to Human Ecology and HIV**

Farmer Life Schools are based on the learning cycle of the IPM Farmer Field School where each week, a group of farmers meet in the field. This regular meeting consists of a set of activities in the village, visits to families, presentations, discussions, special topics and group dynamics. These activities assist farmers in recognizing and analyzing the inter-related elements of their lives, in much the same way as they apply their mastery of ecological concepts to their fields.

In the FLS, farmers examine problems which threaten their livelihoods, weigh available options and make decisions about what action they should take. Issues addressed in FLS's range from poverty, loss of land, occupational health associated with pesticide use, family planning, alcoholism, domestic violence and the attendance of children at school, to specific health problems concerned with different diseases such as dengue, malaria and HIV/AIDS.

Source: Community IPM Cambodia/FAO, "Staying Alive Along Route 5," 2000.

<sup>98</sup> Kadonya C. *The impact of HIV/AIDS on smallholder agriculture in Tanzania: rethinking of other intervention strategies*, paper presented at the first Regional Conference for Eastern and Southern Africa on Responding to HIV/AIDS: Technology Development Needs of African Smallholder Agriculture, Harare, June 1998.

<sup>99</sup> Page S. *Towards a new agricultural research agenda: the need for a paradigm shift toward farmer participatory research and training in the interest of Zimbabwe's AIDS survivors*, paper presented at the international conference AIDS, Livelihoods and Social Change in Africa, Wageningen Agricultural University, 15-16 April 1999.

<sup>100</sup> FAO Community IPM Programme, Cambodia, "Staying Alive Along Route 5," FAO/UNDP, 2000.

through a dynamic learning process rather than a top-down teaching exercise. Farmers learn how to analyse their problems rather than being taught what their problems are. This empowers rural men and women and could prove instrumental to behaviour change. Similarly, IPM's training methodology focuses on training trainers in facilitation skills and problem solving analysis rather than on fixed messages delivered to the farmers. Valuable lessons on using agricultural extension services to impart messages on HIV prevention and AIDS mitigation learned from the IPM FFSs can be extended to sub-Saharan Africa.

The following initiatives may help MoAs and their partners adjust agricultural policies, programmes and services to the conditions created by HIV/AIDS:

### **1. Adopt an HIV/AIDS mandate**

Adjustments of agricultural policies, strategies and programmes are likely to be conditional to the adoption of an HIV/AIDS mandate endorsed at the highest political level that specifies which effects of HIV/AIDS fall within the mandate of the MoA and how the epidemic affects these (i.e. the promotion of labour-intensive export crops, etc.). Such a mandate needs to be accompanied by awareness-raising within and beyond the MoA to sensitize staff, partners and clients to the significance and implications of this mandate.

### **2. Address rural producer needs and circumstances**

In the pursuit of increased food production, the producers and the conditions in which they live and work can be overlooked. Given that HIV/AIDS not only affects agricultural production but also household food and nutrition security and livelihood systems, it is not enough to know which farming systems are vulnerable to labour loss. It is also important to **identify those households and producers who are most vulnerable to food and nutrition insecurity, to prioritize their needs and to explore through which structures the goods and services they require for survival can be delivered.**<sup>101</sup>

This will entail taking account of the changes in the composition of MoA clientele brought about by HIV/AIDS (namely, the growing number of elderly, women and children assuming tasks previously performed by young adult men) in its policies and programmes. However, it should be emphasised that HIV/AIDS does not create a "new clientele" as has sometimes been argued. Households headed by the elderly, widows and youths (as a result of disease, war and drought) have always been part of the clientele of MoAs. HIV/AIDS has increased the proportion of these groups, which now make up a growing proportion of MoA clienteles.

Addressing rural producer needs and circumstances will also entail taking account of the changing nutritional needs of households and communities affected by HIV/AIDS directly or indirectly.

In order to address the felt needs, interests and constraints of rural producers, **a shift is needed from a production- to a client-based approach.** The objective should be to bolster the resilience of farm households by helping them cope with shocks and crises, including HIV/AIDS, and by enhancing household food, nutrition and livelihood security.

### **3. Address HIV/AIDS as a contributing factor to food, nutrition and livelihood insecurity**

---

<sup>101</sup> Cohen D, op. cit., p. 6.

There is a need to incorporate **HIV/AIDS as a contributing factor to food, nutrition and livelihood insecurity** alongside other shocks that befall rural households, such as drought. What is of critical importance to MoAs is that unlike other shocks, HIV/AIDS can be, in some instances, one from which vulnerable households may never recover.<sup>102</sup> The adverse effects of AIDS on the farm household production-domestic labour interface in particular, need to be understood as a central component of HIV/AIDS-induced food and livelihood insecurity. Further, the implications of HIV/AIDS on the nutritional status of household members, and particularly children, also need to be addressed.

#### **4. Factor labour constraints in the formulation of smallholder agricultural policies and programmes**

**Smallholder agricultural policies** may, in some cases, need to take into account the growing labour constraints associated with HIV/AIDS and the ensuing potential disruption to the rural economy and social structure. In many countries in sub-Saharan Africa, agricultural policies tend to be premised on intensive food production strategies on the basis of virtually unlimited labour availability. Such assumptions may need to be revisited in view of the scale of the HIV epidemic.

For example, the banana/coffee/bean farming system in a Tanzanian village in Bukoba District has changed into a cassava/sweet potato farming system under the impact of HIV/AIDS.<sup>103</sup> Major changes in livestock management have also been recorded. One study concludes that agricultural strategies for Bukoba District need to reflect these changes. At present, research and extension strategies in the district are geared toward the maintenance and promotion of the banana/coffee system.<sup>104</sup> This is premised on the assumption that household farm labour is readily available. Yet, as argued above, this may no longer be the case in areas heavily affected by the HIV epidemic.

Further, the implications of changes in farming systems on nutrition also need to be addressed as there may be shifts toward less nutritional crops which could have far-reaching implications for household nutrition security.

#### **5. Factor household coping mechanisms to HIV/AIDS in the formulation of smallholder agricultural policy and research**

To give but one example, cassava and sweet potatoes are considered “orphan crops” in mainstream agricultural research programmes in Tanzania. One study recommends that the two crops—which are increasingly being re-introduced into farming systems as a result of the impact of AIDS—be upgraded from “hunger crops” to “main subsistence crops,” thus providing them with their required share of research and development attention. In other words, resources must be allocated for research and extension on these tuber crops to enhance food security in vulnerable households.<sup>105</sup> By extension, policy recommendations about the relative merits of particular crops in a given farming system should take into account the impact of HIV/AIDS on household labour and income. Research should correspond more closely to the needs of farm households with high dependency ratios and of households headed by the elderly, women or the young.<sup>106</sup> Equally importantly,

<sup>102</sup> See Thompson A and Metz M. *Implications of economic policy for food security: a training manual*, FAO training materials for agricultural planning #40, 1997, pp. 95-96.

<sup>103</sup> Rugalema, op. cit., p. 199.

<sup>104</sup> *ibid.*

<sup>105</sup> *ibid.*

<sup>106</sup> Kadonya, op. cit.

there is a need to ensure that crops being promoted are not only less labour intensive but, equally importantly, of high nutritional value.

**6. Promote low-risk, low-input strategies for female-headed households, and for households headed by the elderly and by youths and orphans.**

These may include:

- The reclamation of traditional food crops (cassava, sweet potato, cowpea, sorghum, finger and pearl millet), in addition to open-pollinated maize varieties with a lower input requirement, and improved storage qualities.
- Inter-cropping of cereals and cucurbits to fix nitrogen and smother weeds.
- Creation of community seed banks to facilitate the conservation of traditional genetic resources.
- Enhancement of soil fertility and elimination of the need for ploughing through the planting of live fences to protect mulched and zero-tilled fields.
- Live fences to provide fodder, fruit, oil and a refuge for the natural enemies of many crop pests.
- Improved availability and planting of fruit trees to supplement local diets and provide an opportunity to gain additional income, with only limited extra labour.
- The reduction of the labour requirement and risk associated with the keeping of cattle, by encouraging farmers to raise small livestock (chicken and rabbits) as a protein source as well as for manure.
- Zero-grazed dairy cows to eliminate the need for herding and produce bio-gas for household use.
- Cash crops which require low inputs to reduce production costs (this would need to be accompanied by natural methods of soil amelioration and pest management).<sup>107</sup>

**7. Protect land ownership rights, particularly among women and children.**

Issues related to land ownership are of critical importance to households affected by HIV/AIDS. In Siaya and Kisumu Districts of Kenya, for example, land has been demarcated for issuance of title deeds but only 58% of households have title deeds for the land they own. The rest do not legally own the land they farm, have not collected their deeds, or are uncertain of the status of the land they believe they own.<sup>108</sup> One study recently found that under the pressure for cash created by AIDS morbidity, many families lose their property without their knowledge, while an increasing number of women and their sons are taking male heads of households to court for having sold the only land the family owned in order to raise money for medication.<sup>109</sup> Protecting the rights of women and children in terms of land ownership needs to be prioritized, given that without land these families may be unable to sustain themselves.

---

<sup>107</sup> Page, *op. cit.*, p. 8.

<sup>108</sup> Ayieko, *op. cit.*, p. 20.

<sup>109</sup> *ibid.*

## 8. Mainstream HIV/AIDS in MoA policies, programmes and operations

Experience with mainstreaming HIV/AIDS concerns to date reveals that: a) projects should be supported for longer than one year and should preferably be located within “hard” MoA units (such as crop production, extension, livestock, etc.) rather than in “soft” units; b) there should be adequate resources for follow-up activities; and c) ownership is a critical factor for the sustainability of mainstreaming efforts. The following measures may assist MoA in mainstreaming HIV/AIDS:

i) *Incorporate HIV/AIDS in MoA workplans and policy/programme documents*

This is necessary in order for mainstreaming exercises to be sustainable, and to ensure that HIV/AIDS is integral to policy and programme design and implementation.

ii) *Integrate HIV/AIDS in donor-supported MoA initiatives*

Every MoA has a number of donor-supported projects and programmes operating in headquarters and in various parts of the country. In Zambia, for instance, the MAFF has a total of 10 donor-funded programmes.<sup>110</sup> Only one, the UNDP-supported Smallholder Farming Systems Diversification Programme had an HIV/AIDS component in 1999, but it appears that this was almost exclusively health-oriented. If MoAs are to be encouraged to address HIV/AIDS in their core programmes, donor-supported projects must also follow suit or else HIV/AIDS activities will continue to be conducted on an *ad hoc* basis.

iii) *Incorporate HIV/AIDS in the curriculum of agricultural colleges and training institutions*

To ensure that future recruits of MoAs and partner organizations have the requisite skills with which to address the technical implications of the impact of HIV/AIDS on their work, the MoAI in Malawi has recommended that HIV/AIDS is included in the curriculum of the Natural Resources College (a training institution for Field Assistants and Farm Home Assistants, among others).<sup>111</sup> The FAO Representative in Namibia has even suggested introducing agricultural education in the curricula of primary and secondary schools.<sup>112</sup>

iv) *Introduce HIV/AIDS in Agricultural Sector Networks*

More than 20 years into the HIV epidemic, a number of sub-Saharan African countries have gained a great deal of knowledge and experience in addressing the impact of HIV on agriculture and rural development. However, the knowledge and experience gained are under-utilized, as networking and sharing of experiences among the various countries in the region are largely absent or else limited. To some extent, MoAs have been responding to the epidemic in relative isolation. A few ministries have initiated similar types of activities, such as the production of IEC materials on the impact of the epidemic on agricultural extension workers. This duplication of effort is in many cases unnecessary and it depletes the meagre resources available for HIV/AIDS initiatives.

<sup>110</sup> These include the Agriculture Support to Northern Province (ASNP), the Luapula Livelihood and Food Security Programme (LLFSP), the Small Holder Farming Systems Diversification Programme (SFSDP), the Southern Province Household Food Security Programme and the North-Western Province Area Development Programme, the Agricultural Sector Investment Programme (ASIP) in Eastern Province, Economic Expansion in Outlying Areas (EEOA), Support to ASIP in Southern Province and the Smallholder Irrigation and Water Use Programme. See Kamwanga et al., op. cit., p. 8.

<sup>111</sup> Bota, Malindi and Nyekanyeka, op. cit.

<sup>112</sup> Personal communication, Emelia Timpo, FAO Representative in Namibia, 10 August 2000.



Many MoAs have drawn up plans of action to address HIV/AIDS. For example, the MoAaC of Tanzania endeavours to:

- integrate HIV/AIDS into agricultural research;
- integrate HIV/AIDS control interventions into the agricultural extension system;
- create a data bank to provide information on various aspects of the epidemic; and
- strengthen the analytical capability of planners to enable them to project the socio-economic impacts of the epidemic on rural households, communities and the nation.<sup>113</sup>

The main constraint for the MoAaC is that it does not have the resources to implement its plan of action. This is likely to be the case in many other countries. Thus, even if an MoA has a comprehensive plan of action for HIV/AIDS, this may not be sufficient, as financial resources and technical competence may be lacking.

One way to overcome this relative isolation of efforts and the lack of resources is to explore the various networks serving the agricultural sector and identify a suitable one for the exchange of experiences, data and best practices on agriculture-specific responses to HIV/AIDS. The objective would be to use each Ministry's comparative advantage in the response to the HIV epidemic and to assess the replicability of successful initiatives, identify common needs, develop training capabilities within a common framework and share training materials. For instance, one MoA may have focused on addressing the impact of AIDS on agricultural extension services while another may have focused on the impact on livestock production. Some MoAs may have focused on training methodologies while others may have focused on human resource issues.

A first step towards incorporating HIV/AIDS into existing agricultural sector networks would be to draw up an inventory of potential areas of response to HIV/AIDS that each Ministry of Agriculture can undertake on the basis of its comparative advantage. Next, activities to be undertaken within the network will have to be prioritized, after which the modalities of how to operationalize and coordinate the proposed interventions and address the issue of resources would need to be defined.

A key task would also be to get the impact of HIV/AIDS on agriculture as a sector more clearly defined and measured. This will help redefine key policy issues and generate effective ways of responding to the impact of the epidemic on agriculture and rural communities. UNAIDS can play an important role in this process by making its website available to MoAs in order to facilitate the dissemination and distribution of research documents, HIV/AIDS impact studies and other relevant documentation.

The Consultative Group on International Agricultural Research (CGIAR) or one of its affiliates (such as the International Service for National Agricultural Research or ISNAR) could be one such network through which the impact of HIV/AIDS on the agricultural sector in general and on MoAs in particular could be addressed. The CGIAR's system-wide initiative on the impact of HIV/AIDS on agriculture, agricultural research and development (SWIHA) provides an appropriate platform and entry point for such an exercise.

---

<sup>113</sup> MoAaC. Response to the FAO questionnaire on the impact of HIV/AIDS on MoAs, April 2000.

Another such network could be the Southern Africa Development Community (SADC) Food Security Network currently being coordinated in Harare, Zimbabwe, which could be supported to facilitate the dissemination of HIV/AIDS information and best practices in MoAs and to act as a repository of information for member countries.

## 5. BIBLIOGRAPHY

AIDS cripples economies of sub-Saharan Africa, the *International Herald Tribune*, 13 December 1999.

Ayieko A K. *From single parents to child-headed households: the case of children orphaned in Kisumu and Siaya Districts*. HIV and Development Programme Study Paper No. 7, 1998.

Barnett A, Blas E and Whiteside A. series eds. AIDS briefs for sectoral planners and managers. *Subsistence agriculture, commercial agriculture*.

Barnett T. *The effects of HIV/AIDS on agricultural production systems and rural livelihoods in Eastern Africa: a summary analysis*, FAO, 1994.

Bollinger L and Stover J. *The economic impact of AIDS*, The Futures Group International, September 1999.

*The economic impact of HIV/AIDS in Swaziland*, The Futures Group International in collaboration with the Research Triangle Institute and the Centre for Development and Population Activities, September 1999

*The economic impact of AIDS in Zambia*, The Futures Group International, September 1999.

, and Kibirige V. *The economic impact of AIDS in Uganda*, The Futures Group International, September 1999.

Bota S, Malindi G and Nyekanyeka M. *Factoring AIDS into the agricultural sector in Malawi*, Ministry of Agriculture and Irrigation, Powerpoint presentation presented at the Durban Toolkit Workshop, 1998.

Cohen D. *The HIV epidemic and sustainable human development*, paper prepared for the fourth International Congress on AIDS in Asia and the Pacific, October 1997.

*Poverty and HIV/AIDS in sub-Saharan Africa*, UNDP HIV and Development Programme, Issues Paper No. 27, 1998.

*Human capital and the HIV epidemic*, UNDP HIV and Development Programme, May 2000.

*Evaluating HIV and AIDS: why capacity development is central to assessing performance*, UNDP, August 2000.

Davies, Sarah, Margie Schneider, Grace Rapholo, David Everatt. *Guidelines for Developing a Workplace Policy and Programme on HIV/AIDS and STDs*. South Africa Department of Health/CASE, March 1997.

FAO. *Fighting AIDS in rural Areas: why and how should extension workers help*, Ideas book, 1996.

*Implications of economic policy for food security: a training manual*, Training Materials for Agricultural Planning No. 40, 1998.

FAO. *What has AIDS to do with agriculture?*, Rome, 1994.

FAO. *Impact du VIH/SIDA sur les systèmes d'exploitations agricoles en Afrique de l'Ouest*, 1997.

Fransen L and Whiteside A. *Considering HIV/AIDS in development assistance: a Toolkit*, EEC, 1997.

Forsythe S and Rau B. *AIDS in Kenya: Socio-economic impact and policy implications*, USAID/AIDSCAP/ Family Health International, 1996.

Gillespie S. *The potential impact of AIDS on food production systems in Central Africa*, FAO, 1988.

GTZ. *Factoring HIV/AIDS into the agricultural sector in Kenya*, 1999.

Hegle J. *Factoring HIV/AIDS prevention and mitigation activities into the programming of SG 2000 in Malawi*, Global 2000, The Carter Center, November 1999.

Hemrich G. *HIV/AIDS as a cross-sectoral issue for technical cooperation*. GTZ HIV/AIDS Prevention and Control in Developing Countries. Paper No. 1, 1997.

*The relevance of HIV/AIDS to GTZ-supported projects in Kenya*, Workshop Report, GTZ-Kenya, Nairobi, March 1998.

*The impact of AIDS on food security: draft workshop report*, KIT, Bukoba Tanzania, June 1999.

Kamwanga J et al. *Disease, HIV/AIDS and capacity of the agriculture public sector in Zambia: working draft on impressions from the data on mortality and associated capacity implications*, UNAIDS/UNDP paper, April 2000.

Kwaramba P. *The socio-economic impact of HIV/AIDS on communal agricultural production systems in Zimbabwe*, Zimbabwe Farmers' Union and Friederich Ebert Stiftung, 1997.

Leshabari M T, Kaaya S F, Nguma J and Kapiga S. *Household and community responses to HIV/AIDS in Kyela District*, 1996.

Mutangadura G, Mukurazita D and Jackson H. *A review of household and community coping responses to the HIV/AIDS epidemic in the rural areas of sub-Saharan Africa*, UNAIDS Best Practice Paper, June 1999.

Narathius A and Odongkara F. *An appraisal of the line ministry-AIDS control programmes*, UNDP HIV/AIDS Prevention and Poverty Reduction Programme, Uganda, December 1997.

Page S. *Towards a new agricultural research agenda: the need for a paradigm shift toward farmer participatory research and training in the interest of Zimbabwe's AIDS survivors*, paper presented at the International Conference: AIDS, Livelihoods and Social change in Africa, Wageningen Agricultural University, 15-16 April 1999.

PANOS. *The hidden cost of AIDS*, London, Panos Institut, 1992.

*Report of the regional conference for Eastern and Southern Africa on responding to HIV/AIDS technology development needs of African smallholder agriculture*, Harare, June 8-10 1998.

Rugalema G. *Consequences of loss of labour due to HIV/AIDS in smallholder households in a Buhaya village, Bukoba District, Tanzania*, paper presented at the East and Southern Africa Regional Conference "Responding to HIV/AIDS: Development Needs of African Smallholder Agriculture", Harare, June 8-12, 1998.

*Adult mortality as entitlement failure: AIDS and the crisis of rural livelihoods in a Tanzanian village*, 1999.

Sayagues M. *AIDS hits Uganda's villagers*. *Africa Recovery*, April 1999.

Stover J and Johnston A. *The art of policy formulation: experience from Africa in developing national HIV/AIDS policies*, The Futures Group, August 1999.

Topouzis D. *The impact of HIV on agriculture and rural development: implications for training institutions*, Human Resources in Agricultural and Rural Development, FAO journal, 2000.

*The implications of HIV/AIDS on the work of FAO's investment centre, FAO, Rome, January 1995.*

*The implications of HIV/AIDS for rural development policy and programming, UNDP Study Paper #6, New York, June 1998.*

*The implications of HIV/AIDS for household food security in Africa, paper presented at the regional workshop "Women's Reproductive Health and Household Food Security in Rural Africa", ECA, Addis Ababa, October 1999.*

*Measuring the impact of HIV/AIDS on the agricultural sector in Africa, UNAIDS paper prepared for the Africa Development Forum, December 2000.*

and du Guerny J. *Sustainable Agricultural/Rural Development and Vulnerability to the AIDS Epidemic*, FAO/UNAIDS Joint Publication, UNAIDS Best Practice Collection, December 1999.

and Hemrich G. Multi-sectoral responses to HIV/AIDS: constraints and opportunities for technical cooperation. *Journal of International Development*, 12, January 2000:85-99.

with Hemrich G. *The socio-economic impact of HIV/AIDS on rural families in Uganda: an emphasis on youth*, UNDP Discussion Paper No. 2, 1996.

*Training guide on HIV/AIDS for agricultural extension agents, AIDS Control Programme, MAAIF Uganda, August 1997.*

UNAIDS brief, June 1997.

UNAIDS Best Practice Collection. Key Material, *Expanding the global response to HIV/AIDS through focused action*, 1998.

The World Bank. *Confronting AIDS: public priorities in a global epidemic*, Oxford University Press, 1997.

The World Bank. *Investing in HIV/AIDS*, June 1998.

*The World Bank Newsletter*, November 7, 1997.

The World Bank. *The magnitude and duration of the impact of adult mortality on the per capita income, consumption and savings of households in Kagera, Tanzania*, 1995.